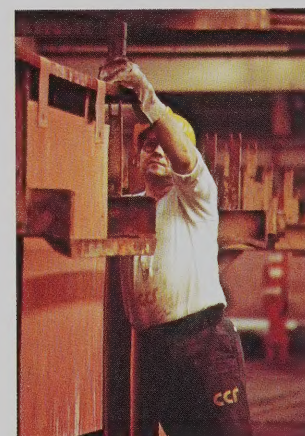
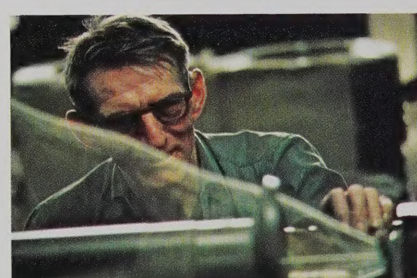
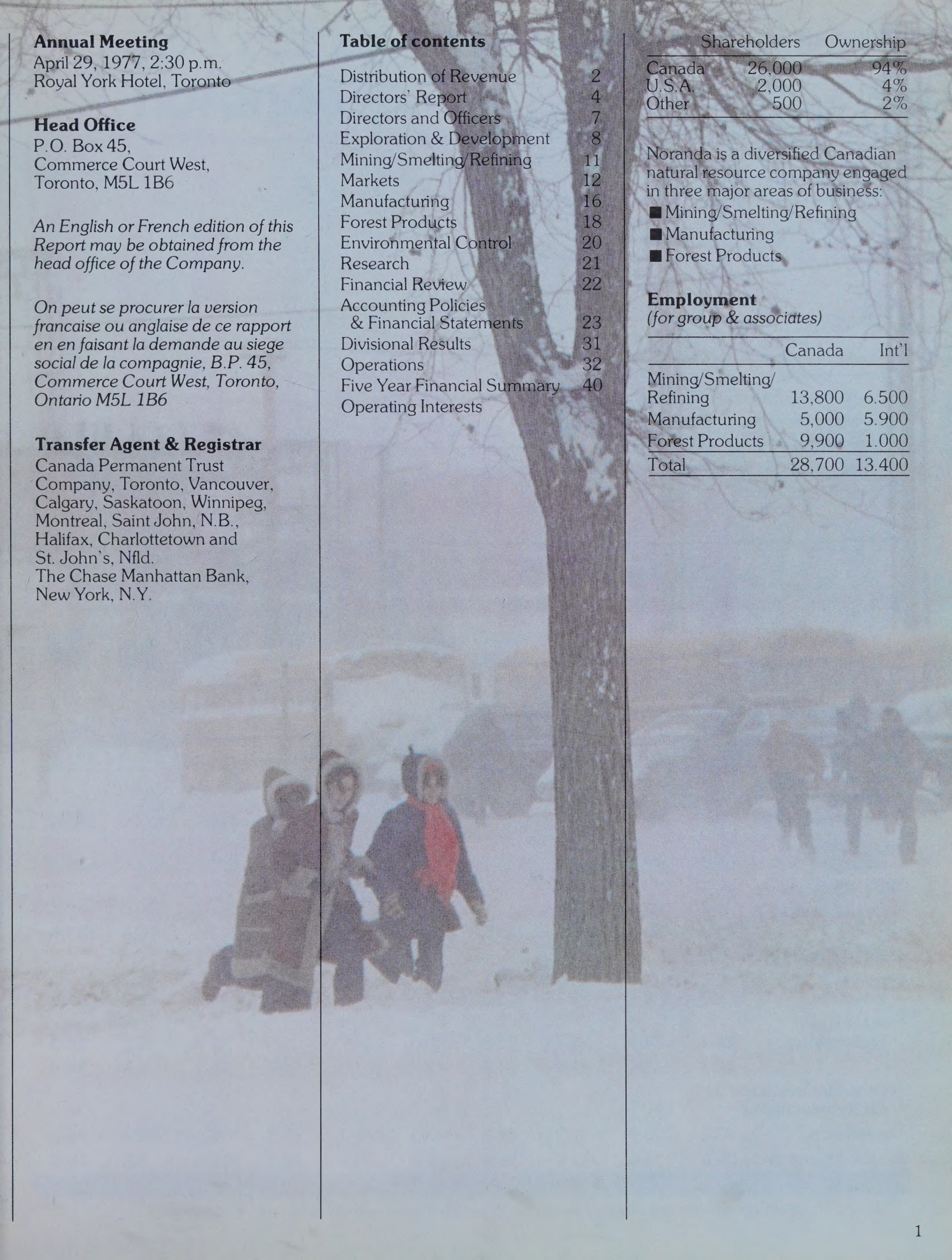
noranda

Annual Report 1976


ccr




noranda



Annual Meeting
April 29, 1977, 2:30 p.m.
Royal York Hotel, Toronto

Head Office
P.O. Box 45,
Commerce Court West,
Toronto, M5L 1B6

An English or French edition of this Report may be obtained from the head office of the Company.

On peut se procurer la version francaise ou anglaise de ce rapport en en faisant la demande au siege social de la compagnie, B.P. 45, Commerce Court West, Toronto, Ontario M5L 1B6

Transfer Agent & Registrar
Canada Permanent Trust Company, Toronto, Vancouver, Calgary, Saskatoon, Winnipeg, Montreal, Saint John, N.B., Halifax, Charlottetown and St. John's, Nfld.
The Chase Manhattan Bank, New York, N.Y.

Table of contents

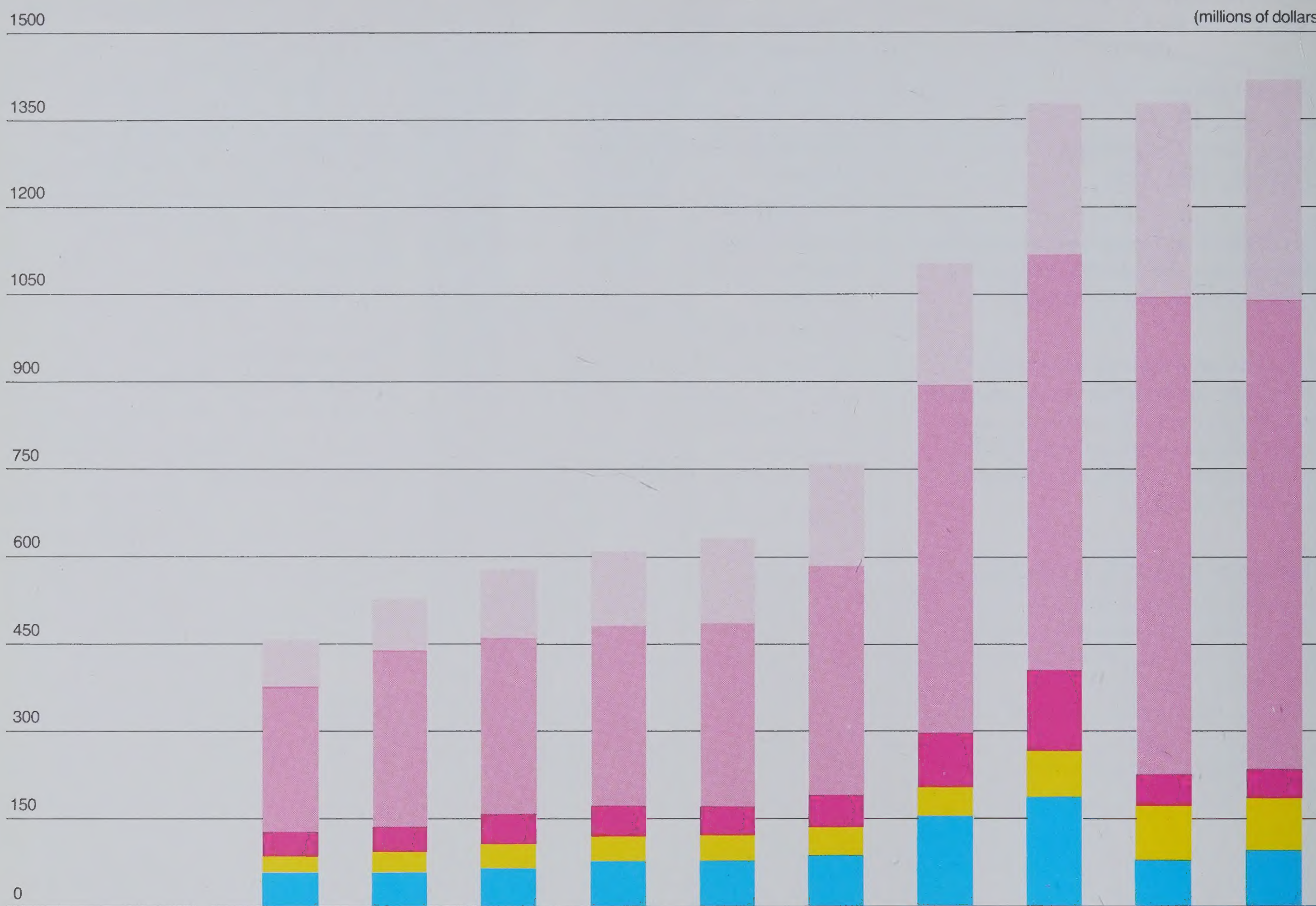
	Shareholders	Ownership
Canada	26,000	94%
U.S.A.	2,000	4%
Other	500	2%

Noranda is a diversified Canadian natural resource company engaged in three major areas of business:
- Mining/Smelting/Refining
- Manufacturing
- Forest Products

Employment
(for group & associates)

	Canada	Int'l
Mining/Smelting/Refining	13,800	6.500
Manufacturing	5,000	5.900
Forest Products	9,900	1.000
Total	28,700	13.400

Distribution of Revenue — A Ten Year Review



Distribution of Revenue On A Combined* Basis

(millions of dollars)	1967	1968	1969	1970	1971	1972	1973	1974	1975	**1976**
Revenue	455.0	525.5	578.9	610.7	632.0	758.5	1,101.7	1,375.8	1,376.2	**1,431.2**
Cost of Operating:										
Wages & Benefits	78.6	88.4	118.5	130.5	148.0	175.3	210.4	260.5	334.9	**386.1**
Payments to Suppliers	251.9	302.6	302.2	309.1	313.8	392.4	595.1	708.8	814.7	**801.9**
Direct Payments to Governments	41.4	42.4	52.9	51.3	49.0	56.2	91.3	142.3	56.0	**49.8**
	371.9	433.4	473.6	490.9	510.8	623.9	896.8	1,111.6	1,205.6	**1,237.8**
Cost of Capital:										
Interest on Borrowings	2.2	9.1	14.4	17.1	16.0	19.2	19.8	33.8	45.3	**61.7**
Dividends to Shareholders	22.1	24.5	26.4	27.2	29.0	28.7	32.9	42.3	47.2	**28.3**
	24.3	33.6	40.8	44.3	45.0	47.9	52.7	76.1	92.5	**90.0**
Remainder available for Reinvestment:										
Depreciation	23.8	26.9	31.7	38.7	44.3	46.2	63.7	75.5	74.8	**78.5**
Retained Earnings	35.0	31.6	32.8	36.8	31.9	40.5	88.5	112.6	3.3	**18.4**
	58.8	58.5	64.5	75.5	76.2	86.7	152.2	188.1	78.1	**96.9**

**Includes Noranda's proportionate share of the above items for those companies not wholly owned.*

Noranda Mines Limited
P.O. Box 45, Commerce Court West
Toronto, Ont., Canada M5L 1B6

noranda

To the Shareholders:

TAKE NOTICE that the Fifty-Third Annual Meeting of the Shareholders of NORANDA MINES LIMITED will be held in the Concert Hall, at the Royal York Hotel in the City of Toronto, Ontario, on Friday, the 30th day of April, 1976, at the hour of 2:30 o'clock (Toronto time) in the afternoon for the following purposes:

(i) to receive reports and financial statements;

(ii) to elect directors;

(iii) to appoint auditors and authorize the directors to fix their remuneration;

(iv) to transact such other business as may properly come before the Meeting.

A copy of the reports and the financial statements to be laid before the Meeting is forwarded herewith.

Shareholders who are unable to attend are requested to date, sign and return the enclosed form of proxy in the return envelope provided.

DATED this 10th day of March, 1976.

By Order of the Board,

R. C. ASHENHURST,
Secretary.

noranda

INFORMATION CIRCULAR

This Information Circular accompanies the Notice of the Annual Meeting of the Shareholders of Noranda Mines Limited (the "Corporation") to be held on April 30, 1976 and is furnished in connection with the solicitation by the management of the Corporation of proxies for use at the Meeting. The solicitation will be primarily by mail but proxies may also be solicited by regular employees of the Corporation. The cost of such solicitation will be borne by the Corporation.

A proxy in the form enclosed with the Notice of Meeting confers discretionary authority with respect to amendments or variations to the matters identified in the Notice of Meeting or other matters which may properly come before the Meeting.

The shares represented by such a proxy will be voted by the persons named herein. **A shareholder has the right to appoint a person (who need not be a shareholder) to represent him at the Meeting other than the persons designated in the form of proxy enclosed with the Notice of Meeting.** Such right may be exercised by inserting the name of such person in the blank space provided in such form of proxy.

A proxy in the form enclosed with the Notice of Meeting may be revoked at any time before it is exercised.

VOTING SHARES AND PRINCIPAL HOLDERS THEREOF

At the close of business on March 1, 1976, 22,932,128 Class A shares without par value and 1,519,463 Class B shares without par value of the Corporation were outstanding. Each share, of either Class, entitles the holder to one vote at all Meetings of Shareholders. Shareholders of record at the time of the Meeting are entitled to vote at the Meeting.

The management of the Corporation understands that Hollinger Mines Limited owns 1,801,520 Class A shares or approximately 7.4% of the outstanding shares of the Corporation and that Labrador Mining and Exploration Limited, an affiliate of Hollinger Mines Limited, owns 815,310 Class A shares or approximately 3.3% of the outstanding shares of the Corporation.

ELECTION OF DIRECTORS

It is proposed to nominate the persons listed below for election as directors of the Corporation to serve until the next Annual Meeting of the Shareholders of the Corporation or until their successors are duly elected or appointed, unless any such person is not available to act as a director, in which event a substitute may be nominated.

Proposed Nominees	Principal Occupation	Director Since	Number of Shares Owned March 1, 1976 Class A/Class B
James C. Dudley, New York, New York.	President, Dudley & Wilkinson Inc.	1970	100
Louis Hébert, Montreal, Quebec.	Chairman & Chief Executive Officer, Banque Canadienne Nationale.	1968	1,000
*William James, Toronto, Ontario.	Executive Vice-President, Noranda Mines Limited.	1968	8,250
*A. J. Little, F.C.A. Toronto, Ontario.	Company Director.	1974	1,500
Leonard G. Lumbers, Toronto, Ontario.	Chairman of the Board, Noranda Manufacturing Ltd.	1962	7,000

Proposed Nominees	Principal Occupation	Director Since	Number of Shares Owned March 1, 1976 Class A/Class B
David E. Mitchell, Calgary, Alberta.	President and Chief Executive Officer, Alberta Energy Company Ltd.	1973	1,100
André Monast, Q.C., Quebec, Quebec.	Partner in the legal firm of St. Laurent, Monast, Walters & Vallieres.	1966	2,000
Thomas H. McClelland, Vancouver, British Columbia.	Chairman of the Board, Placer Development Limited.	1975	100
*Alfred Powis, Toronto, Ontario.	President and Chief Executive Officer, Noranda Mines Limited.	1964	13,450
*William S. Row, Toronto, Ontario.	Chairman of the Board, Noranda Mines Limited.	1960	10,450
*William P. Wilder, Toronto, Ontario.	Chairman and Chief Executive Officer, Canadian Arctic Gas Pipeline Limited.	1966	10,000
*Adam H. Zimmerman, Toronto, Ontario.	Executive Vice-President, Noranda Mines Limited.	1974	6,000

*Members of the Executive Committee.

NOTES: (1) Shareholdings in subsidiaries:

Mr. Leonard G. Lumbers owns 5,000 common shares of Brunswick Mining and Smelting Corporation Limited.

Mr. André Monast, Q.C., owns 10 common shares of Brunswick Mining and Smelting Corporation Limited and 1 share of Gaspé Copper Mines, Limited.

Mr. Alfred Powis owns 10 common shares of Brunswick Mining and Smelting Corporation Limited.

Mr. William S. Row owns 10 common shares of Brunswick Mining and Smelting Corporation Limited.

Mr. Adam H. Zimmerman owns 201 common shares of Fraser Companies, Limited

(2) The information as to shares beneficially owned, not being within the knowledge of the Corporation, has been furnished by the respective nominees.

REMUNERATION OF MANAGEMENT AND OTHERS

1. Aggregate direct remuneration paid or payable during 1975 by the Corporation and its subsidiaries whose financial statements are consolidated with those of the Corporation to the directors and senior officers of the Corporation $1,399,908

2. Estimated aggregate cost to the Corporation and its subsidiaries in 1975 of all pension benefits proposed to be paid to the directors and senior officers of the Corporation under existing plans in the event of retirement at normal retirement age .... $ 105,401

APPOINTMENT OF AUDITORS

The persons named in the form of proxy enclosed with the Notice of Meeting intend to vote for the appointment of Clarkson, Gordon & Co., Chartered Accountants, Toronto at a remuneration to be fixed by the directors.

OTHER BUSINESS

The management of the Corporation knows of no matters to come before the meeting other than the matters referred to in the Notice of Meeting.

DATED this 1st day of March, 1976.

Printed in Canada.

The column for each year displayed on this chart represents the total value of goods and services produced by the Noranda Group. Although statistics show that 43% of Canada's total productive effort is consumed by the various levels of government, Noranda's records show the following distribution of its revenue:

Cost of operating

This portion of total revenue is recirculated through payments to employees, suppliers and governments. In this way, over the ten year period, 84% of total wealth generated, or $7.4 billion out of $8.8 billion, has returned to contribute to the well being of society as a result of business activity carried on by the Noranda Group.

Cost of capital

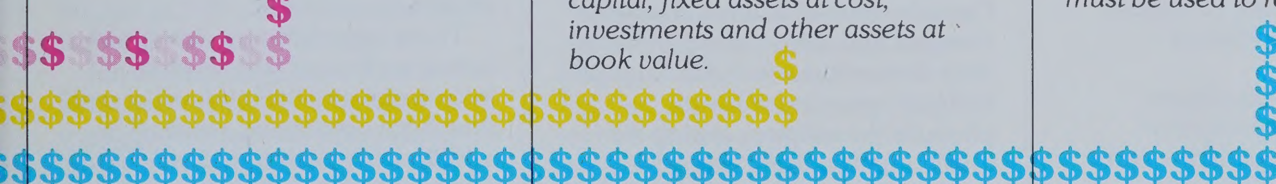
Since 1922 some $2.3 billion has been invested by shareholders and long-term creditors. This money has been employed to build and maintain the Group's productive facilities, to find mines and thus create the jobs that have given rise to the production of goods and services. In return for this investment of their savings, dividends and interest totalling 3.5% and 2.7% of revenue respectively have been paid over the ten year period to shareholders and suppliers of long term funds. These payments represent an estimated average return of 5.8% on the net book value of their investment.*

**Gross capital as of Dec. 31, 1976, consisting of operating working capital, fixed assets at cost, investments and other assets at book value.*

Remainder available for reinvestment

Cash flow represented by depreciation charges and earnings after payment of dividends has amounted to some 10.5% of total revenue, or $0.9 billion over the ten year period and has been consistently reinvested by the Group, being utilized to build or maintain plants or acquire new productive facilities.

In recent years, because inflation has eroded the purchasing power of the dollar, the Group has increasingly turned to long-term borrowing to support the level of growth deemed appropriate, the available cash flow from operations being barely sufficient on average to maintain existing operations. As this debt becomes due cash flow must be used to repay it.



Directors' Report

Earnings and Dividends

Last year's Annual Report characterized 1975 as a very poor year for Noranda. Unfortunately, 1976 was worse, with earnings of $47 million compared to $51 million the previous year. Earnings per share from the various divisions were as follows:

Earnings/Share	1976	1975	% Change
From:			
mining, smelting and refining	$2.61	$2.41	+8
manufacturing	0.45	.98	−54
forest products	0.82	.48	+71
	$3.88	$3.87	—
Less:			
common costs	1.90	1.73	+10
	$1.98	$2.14	−7

Four quarterly dividends of 30¢ were paid on the Class A shares, for a total of $1.20 per share compared with $2.00 in 1975. (Similar payments less 15% taxes were made to the holders of Class B shares.)

World economic conditions failed to improve to the extent anticipated a year ago. In the early months of the year, there was improved demand for most mine products as fabricators rebuilt inventories in the expectation of better business during the second half. When this failed to materialize, fabricators found themselves with excessive inventories and purchases were curtailed sharply.

The result was severe weakness in demand and prices during the second half of the year. All mining, smelting and refining operations were adversely affected. Production was reduced from planned levels and product inventories rose, while costs continued to increase. Substantial progress was made in overcoming the difficulties at Gaspé Copper, but this improvement was offset by a cycle of low grade of ore mined at the Geco Division, a three-month strike at the Brunswick mine, and a complete collapse in the price of gold and phosphate fertilizers. Results were also affected adversely by the high value of the Canadian dollar throughout the year.

Exploration activity was maintained, but overall costs were reduced by the sale of certain oil and gas properties.

Results from manufacturing operations were also unsatisfactory. The low level of capital spending in Canada resulted in weak domestic demand and, with Canadian wage rates above those in the U.S., profit margins were under severe pressure. In addition, during the fourth quarter, there was a $4.5 million unfavourable adjustment in international earnings resulting from the 40% decline in the value of the Mexican peso.

On the other hand, results from forest products operations were considerably better than in 1975, when British Columbia operations were affected by a four month strike. Forest products markets were generally satisfactory, except for panel products.

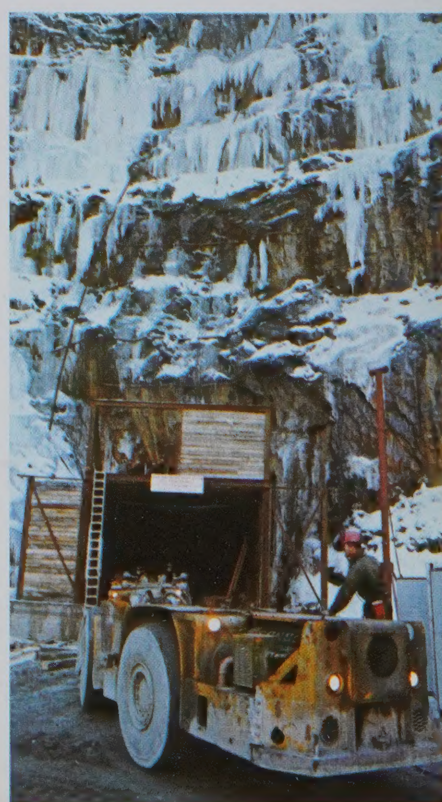
Common costs rose due to high interest rates on increased borrowings required to finance capital expenditures and the high inventory levels.

Efforts continued to control costs to the extent possible in an inflationary environment. In addition, progress was made in correcting the weakness in the basic position of certain operations which were highlighted by the adverse conditions of the past two years.

Financial Position

Throughout the year, capital spending was limited to essential items and programs which had been previously committed. Nevertheless, total capital expenditures of $116 million, while less than in 1975, remained at a high level. Major items were the expansions at the Brunswick mine, Noranda Aluminum, Fraser Companies and Noranda Metal Industries. In addition, pre-production and exploration expenditures of $34 million were capitalized. On the other hand long-term investments were reduced by $22 million reflecting repayment of advances by certain affiliated companies.

These expenditures, combined with a continued high level of inventories and the low level of cash flow from operations, resulted in additional financing during 1976. Long term debt rose by a net amount of $70 million, comprising new financing of $108 million and



repayments of $38 million. Major new borrowings were a $35 million U.S. issue by Fraser Companies, a $35 million Canadian issue by Brunswick Mining & Smelting, an issue of $25 million medium term notes by Noranda and a $10 million U.S. issue of pollution revenue bonds by Noranda Aluminum.

The net result was a slight increase in Noranda's net working capital to $191 million.

Contingent liabilities declined by $25 million to $33 million, mainly as the result of completion of project financing by Tara and a refunding of debt by Northwood Pulp & Timber which had been guaranteed by Noranda.

Major Developments

Expansion of the Noranda Aluminum reduction plant at New Madrid, Mo. was completed during the summer and full production at the rate of 140,000 tons per year was achieved by the year end. The final cost of the project was close to budget at $77 million, financed by the issue of long term notes.

Sinking of the second shaft at Brunswick's No. 12 mine continued throughout the year. This program, which is designed to expand production to 11,000 tons per day by 1980, is now expected to cost $53 million, about 10% above budget.

The Tara project in Ireland is somewhat behind schedule, but should be completed during the spring of 1977 at a cost within the $150 million of financing arranged. Noranda holds a 20% interest in Tara Exploration and Development which, in turn, holds a 75% interest in the company developing the mine. In addition, Noranda has advanced $23 million secured by Tara shares most or all of which may be repaid through purchase of these shares. When in full production, Tara will produce concentrates containing 248,000 tons of zinc and 45,000 tons of lead per year.

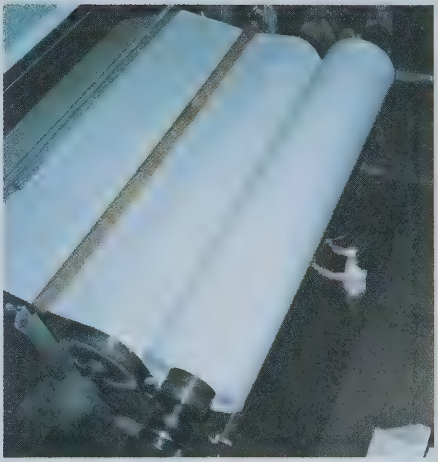
During the fourth quarter the Potash Corporation of Saskatchewan, a provincial crown corporation, began an examination of Central Canada Potash. This examination may lead to an offer to purchase this operation during 1977.

Work continued on the delineation of the 51%-owned phosphate reserves in Florida during the year. Encouraging results continued to be obtained in the oil and gas exploration program in Alberta and British Columbia, and reserves of natural gas were substantially increased.

Fraser Companies' $91 million program to rebuild its Edmundston pulp mill progressed satisfactorily. This project will increase efficiency and capacity as well as improving environmental control and product quality. British Columbia Forest Products completed arrangements for a 40% participation in a major pulp and lumber complex at St. Felicien, Que. When completed in late 1978, this complex will have a capacity of 262,000 tons of bleached sulphate pulp and 155 million board feet of lumber per year. Financing of $300 million has been arranged, including an investment by British Columbia Forest Products of $28 million.

General Business Environment

Canada's recent relative economic performance is of serious concern, particularly as compared to the United States. In spite of controls, inflation rates and wage increases are still higher than those in the United States. When combined with the high value of the Canadian dollar, the result has been to seriously erode the competitive position of domestic industry. Particularly noticeable has been the divergent trend of corporate profits and liquidity in the two countries, which make it likely that investment levels will remain sluggish in



Canada and that the economic recovery will be slow. The impact on Noranda group manufacturing operations, in particular, has been and will remain severe.

The federal government's anti-inflation program — which in effect controls profits, dividends and wages — remained in effect throughout the year. The original controls on profit margins announced late in 1975 were made even more restrictive in September of 1976. The controls had little direct impact on Noranda's profitability in 1976, since market forces held margins at levels considerably less than permitted. However, there is concern that the controls may impair Noranda's ability to restore profits to more reasonable levels if and when allowed by economic conditions. Generally, new collective agreements negotiated during the year were within the guidelines, which permit significant real income gains for employees.

The new British Columbia government removed the royalties which in some cases had resulted in mines paying more than 100% of their income in taxes. B.C. taxes are now based on earnings rather than gross revenues and, although the overall burden is still high, this change is the first reduction in provincial mining taxes in many years.

The Quebec election in November increases the uncertainty over whether that province will remain part of Canada. During the past five years, the Noranda group has invested some $330 million in Quebec on expansion of various operations, and some 40% of earnings are derived from facilities in that province — largely from metallurgical operations and manufacturing. In spite of political uncertainties, however, there is no reason to believe that these operations cannot continue on a satisfactory basis.

Inflation

A commonly accepted method of measuring the impact of inflation on reported financial results is still being sought by professional accountants and other concerned groups. Part of the difficulty results from the fact that financial statements are used for a number of very different purposes, each suggesting a somewhat different approach. However, while some needs can be met by financial statements prepared in the traditional way using historical costs, they give a somewhat misleading picture of the true financial health of a corporation, particularly those in capital-intensive industries. Distortions arise from inventory profits which do not provide any cash to a continuing operation and from the fact that depreciation reserves become completely inadequate to provide for the replacement of existing productive facilities.

There is some support for the concept of restatement of financial results to reflect changes in the general purchasing power of money, using a general price index. However, this would also be misleading since investors and others would be entitled to believe that such a restatement would reflect the full impact of inflation on the financial health of a corporation. This would not be so since the costs of construction and new equipment have been escalating at rates far in excess of any general price index. However, while only the use of the replacement cost of assets in calculating depreciation reserves would provide a true indication of the impact of inflation on real earnings, the problems involved in arriving at such replacement costs are formidable.

In the meanwhile there is growing concern that investment decisions and public perceptions continue to be based on misleading information and that governments continue to tax earnings that are illusory. Clearly, if final solutions cannot be reached in the near future, some interim steps should be taken to relieve the taxation of illusory profits. Such simple measures as permitting the use of "LIFO" inventory valuation as is done in the United States and the indexing of fixed assets for the purpose of calculating capital cost allowances would be of some help in relieving the tax burden and thus providing the funds so desperately needed by industry to renew productive facilities.

If Noranda's fixed assets alone were restated to reflect their replacement cost—estimated to be at least twice original cost—1976 results would reflect a net loss of $32 million compared to a loss of $24 million in 1975.

Outlook

The econmic recovery has been very much slower than was forecast a year ago. As a result, inventories of most basic commodities throughout the world are excessive and prices are at levels which are uneconomic for many existing operations and totally inadequate to justify new capacity. Substantial increases in prices must occur at some point, but not until inventory levels have been reduced.

At the moment, it appears that the slow pace of the economic recovery will continue through 1977. If so, there is little prospect for a substantial reduction in inventory levels and a corresponding improvement in demand and prices for basic commodities. Some strengthening should occur, but more slowly than experienced during past economic recoveries.

Noranda's earnings during 1976 were totally inadequate and while some improvement should be recorded during 1977, a satisfactory return on assets employed seems unlikely.

Alfred Powis

President.

February 15, 1977
Toronto, Ontario.

Directors

James C. Dudley,
President, Dudley & Wilkinson Inc.,
New York
Elected 1970

Louis Hébert,
Chairman,
Banque Canadienne Nationale,
Montreal
Elected 1968

***William James,**
Executive Vice-President,
Noranda Mines, Toronto
Elected 1968

***A. J. Little,**
Company Director, Toronto
Elected 1974

L. G. Lumbers,
Chairman, Noranda Manufacturing Ltd.,
Toronto
Elected 1962

Thomas H. McClelland,
Chairman, Placer Development Ltd.,
Vancouver
Elected 1975

D. E. Mitchell,
President and Chief Executive Officer,
Alberta Energy Company Ltd., Calgary
Elected 1973

André Monast,
Partner — St. Laurent, Monast,
Walters and Vallieres,
Quebec
Elected 1966

***Alfred Powis,**
President and Chief Executive Officer,
Noranda Mines, Toronto
Elected 1964

***W. S. Row,**
Chairman of the Board, Noranda Mines,
Toronto
Elected 1960

***W. P. Wilder,**
Chairman and Chief Executive Officer,
Canadian Arctic Gas Pipeline Limited,
Toronto
Elected 1966

***Adam H. Zimmerman,**
Executive Vice-President,
Noranda Mines, Toronto
Elected 1974

*Member of the Executive Committee

Honorary Directors

J. R. Bradfield, Honorary Chairman
F. M. Connell
A. O. Dufresne
R. V. Porritt
J. D. Simpson
L. H. Timmins

Officers

Alfred Powis,
President and Chief Executive Officer

W. S. Row,
Chairman of the Board

William James,
Executive Vice-President

Adam H. Zimmerman,
Executive Vice-President

R. C. Ashenhurst,
Secretary

E. K. Cork,
Vice-President — Treasurer

D. H. Ford,
Vice-President — Comptroller

J. A. Hall,
Vice-President — Mine Projects

K. C. Hendrick,
Vice-President — Sales

J. O. Hinds,
Executive Assistant to the President

R. L. Pepall,
Consulting Counsel

R. P. Riggin,
Vice-President — Corporate Relations

D. E. G. Schmitt,
Vice-President — Mines

B. H. Grose,
Assistant Secretary

W. J. Barbour,
Assistant Treasurer

B. C. Bone,
Assistant Treasurer

Exploration & Development

$21.6 million were expended on mineral exploration and development compared with $20.6 million in 1975. This was spent 47% in Canada, 34% in the U.S.A., 3% for ocean mining and 16% in other countries.

The Goldstream copper-zinc deposit in British Columbia is undergoing final feasibility studies. The option on the West Macdonald property near Noranda, Quebec was exercised. Other properties await higher metal prices before commencing final feasibility studies. In British Columbia, together with Kerr Addison, an agreement was signed with Tyee Lake and Peregrine Exploration on their uranium property. In Saskatchewan, agreements were signed with Gulf Minerals (Canada) Limited covering prospective uranium areas near their Rabbit Lake Mine, and with Central Electricity Generating Board of Britain covering Noranda's claims in the area between Key Lake and Rabbit Lake. The Saskatchewan Mineral Development Corp. is a party to both agreements.
There is little incentive to acquire further lands in Saskatchewan or Manitoba because the possibility of obtaining a reasonable profit from mining operations has been removed through government ownership, excessive royalties and taxes. An agreement was concluded with AGIP Canada, a subsidiary of ENI of Italy, for uranium exploration in some areas of Canada.

Noranda is negotiating with ENAMI of Chile to explore, study, and if attractive, to develop the Andacollo porphyry copper deposit. Petromin of Saudi Arabia and Noranda entered a joint venture whereby Noranda will explore the Kutam deposit. In Australia, Noranda is waiting for the government policy on uranium mining so steps can be taken to develop the Koongarra deposit. Programs continued in Zambia, Korea, Cyprus, Ireland, Peru and Brazil.

In ocean mining, activities continued toward design and testing of the manganese nodule collector and lift systems. Metallurgical activities include process development and evaluation of the 1976 pilot plant runs and updating of capital and operating cost estimates for the processing of the copper, nickel and cobalt bearing manganese nodules.

Noranda Phosphate
Established in 1975 as a joint venture by Noranda and New Jersey Zinc, the Pine Level Project continued to acquire phosphate bearing properties in Desoto County, Florida. The project now holds about 7500 acres on which drilling has indicated some 32 million tons of recoverable phosphate rock. Noranda has a 51% undivided interest in these properties and baseline studies, required to obtain development approval, are underway.

Canadian Hunter
Investment in oil and gas exploration and development over the past 3½ years has been about $57 million. Expenditures during 1976 were approximately $26 million, comprising $14 million for land acquisitions and exploratory drilling and $12 million for oil and gas field development. The 1976 investment was partially financed by sale of a $9.0 million production interest to Giant Mascot Mines and $2.0 million from disposal of miscellaneous properties. Earnings from production operations in 1976 were $1.5 million.

Participation in 83 wells resulted in 21 oil and 38 gas producers, an overall drilling success ratio of 71 percent.

Gross working interest oil production is averaging 975 barrels per day. Gross working interest gas sales increased to 15 million cubic feet per day with the addition of the remainder of the Kipp-Coaldale field in southern Alberta and wells at Siphon and Town in northeastern British Columbia.

Proven drilled net reserves as of December 31, 1976 were 2.8 million barrels of oil and 138 billion cubic feet of gas. Probable reserves were 2.6 million barrels of oil and 79 billion cubic feet of gas. Land holdings are about 1.5 million net acres.

Panarctic Oils (4.49%)
Noranda's contribution during 1976 was $1.6 million. Total funds subscribed over the past nine years have been $8.2 million.

A new gas discovery was made at Jackson Bay, about midway between earlier gas finds at Kristoffer and King Christian Island. A significant offshore extension to reserves was established in the Hecla gas field.

Wide spaced step-out wells from the Bent Horn F-72 A oil well, 6 miles west on Cameron Island and to the south of Vanier Island were unsuccessful. Bent Horn A-02, three-quarters of a mile southwest of F-72 A was completed with flow rates up to 5,000 barrels per day. Further offset drilling in this direction will determine if the accumulation is large enough for commercial production.

The 1977 budget for participants is $35 million, an increase of $10 million over the 1976 spending level.

Mining, Smelting & Refining

Mining

The Horne orebody at Noranda, Quebec was exhausted in the summer. This mine was the foundation of the Noranda Group of Companies and over its life span of fifty years produced some 59 million tons of ore containing 1.3 million tons of copper, 10 million ounces of gold and 22.3 million ounces of silver.

Two new mines are being developed by associated companies. The Tara zinc-lead mine in Ireland and the Agnew Lake uranium mine in Ontario are both expected to commence production in the second quarter of 1977.

Throughout 1976 base metal mining operations were faced with sluggish demand and depressed prices for most of their products. These conditions were especially difficult for several copper mines in the Group which have low-grade orebodies and relatively high costs per pound of metal contained in concentrate produced. Programs were continued at all mines to minimize capital expenditures and operating costs and to increase productivity. Considerable progress has been made. Nevertheless, such programs have limitations and a significant improvement in marketing conditions is needed before a satisfactory level of earnings can be achieved.

Smelting & Refining

Notwithstanding the closing of the Horne mine, the Noranda smelter continues to treat concentrates from mines within the Noranda Group and from others on a custom basis. However, the supply of concentrates was insufficient for full operation during the latter part of the year. Production in excess of the design capability of the Noranda Continuous Smelting Reactor was made possible by improvements in operating techniques. The reverberatory furnaces are being converted to wet-charge operation in order to reduce dust emissions.

Production from the Gaspé smelter approximated that of 1975 and labour productivity improved.

Canadian Copper Refiners operated considerably below rated capacity due to a shortage of anodes.

The project to expand the production capacity at the Canadian Electrolytic Zinc plant to 225,000 tons per year was completed but the reduced demand for zinc precluded operation at capacity.

The lead smelter of Brunswick Mining and Smelting in Belledune operated well. Excess inventory of lead concentrate was eliminated and lead metal inventory considerably reduced.

Noranda — Interests

Summary of Canadian Mine Production

		Product						
	Ore Treated (tons)	Copper (tons)	Zinc (tons)	Lead (tons)	Silver (ounces)	Gold (ounces)	Molybdenum (pounds)	Muriate of Potash (tons)
Noranda*	17,123,000	84,300	32,500	900	1,599,000	30,500	2,278,000	
Brenda	11,224,000	16,100					8,015,000	
Brunswick	2,477,000	3,800	133,000	40,700	3,012,000			
Central Canada Potash	3,600,000							1,396,000
Kerr	264,000					110,700		
Mattagami Lake**	2,292,000	15,900	157,200	2,300	2,505,000			
Orchan	468,000	2,700	27,400		163,000			
Pamour Porcupine	1,875,000	3,100			69,800	153,400		
Placer***	19,846,000	57,200					15,000,000	

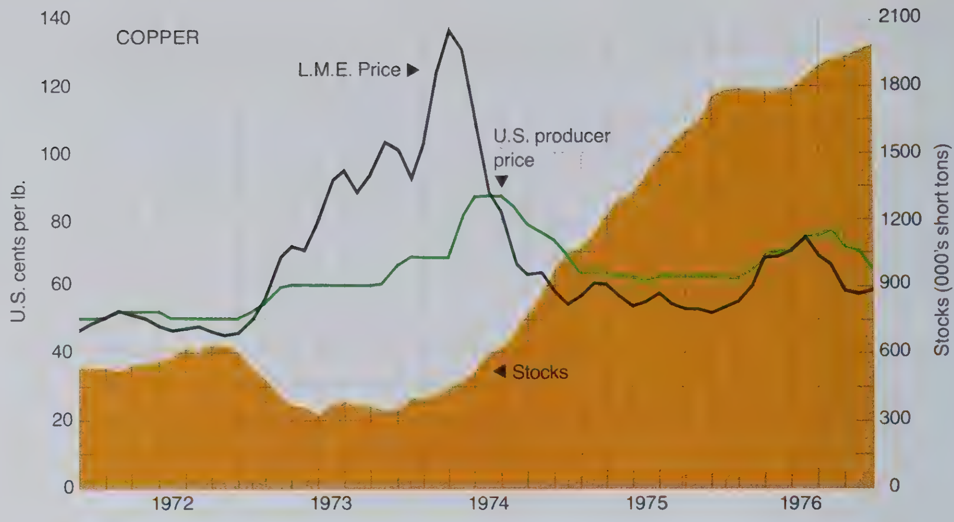
**Horne, Geco, Boss Mountain, Bell Copper, Gaspé   **Mattagami, Mattabi   ***Endako, Craigmont, Gibraltar*

Summary of Smelting and Refining Production

	Product					
	Copper (tons)	Zinc (tons)	Lead (tons)	Silver (ounces)	Gold (ounces)	Cadmium (pounds)
Horne Smelter	229,000					
Gaspe Smelter	73,600					
Canadian Copper Refiners	387,000			22,501,000	336,000	
Canadian Electrolytic Zinc		125,800				380,000
Brunswick — Smelter			51,400	3,004,000		

Markets

At the beginning of 1976 the market outlook was improving. Demand increased, prices rose and production responded, anticipating continued expansion. When the recovery faltered in the second half, supplies were in surplus, leading to rising stocks and price reductions for most commodities. The mood at year end was apprehensive and uncertain.

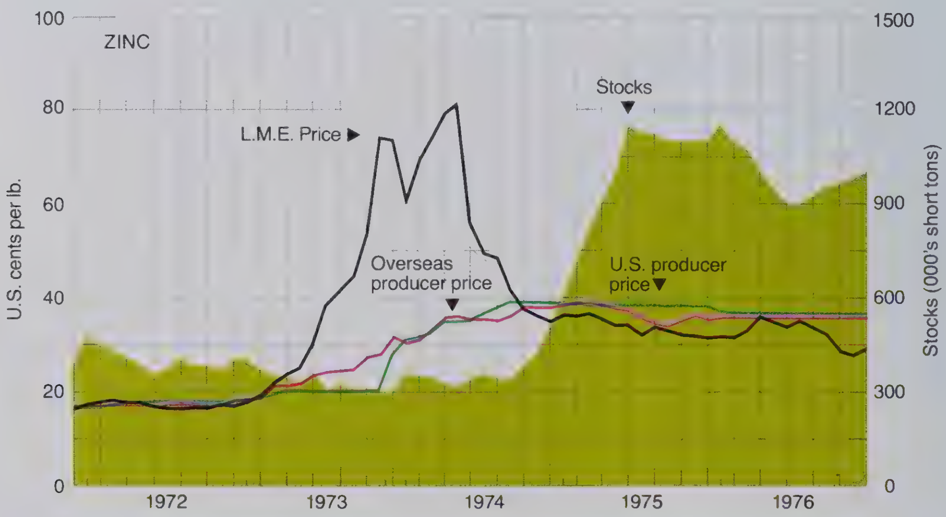


Copper

WESTERN WORLD BALANCE	1974	1975	1976
	('000 Short Tons)		
Supply	7,730	6,875	7,370
Consumption	7,280	6,090	7,140
Year end stocks	975	1,760	1,990

The surge in the United States' economy during the first half was selective in its impact on copper consumption. Automotive, residential construction and household appliances were strong but heavy construction, power generation and distribution, and telephone cables were lagging.

Despite the high stock carryover from 1975, prices reacted sharply upwards as the economic improvement spread to Japan and the EEC. Expectations continued to build in the first half, and the U.S. producer price was increased in stages from 63¢ to 74¢ and the London Metal Exchange quotation rose from 53¢ to 76¢. When the economic momentum was not sustained during the summer lull, prices reacted downward in the U.S.A. to 70¢ and again in the fourth quarter to 65¢ while the LME price dropped to 57¢ at year end. Canadian prices paralleled the changes in the United States and in December reflected the lower value of the Canadian dollar.

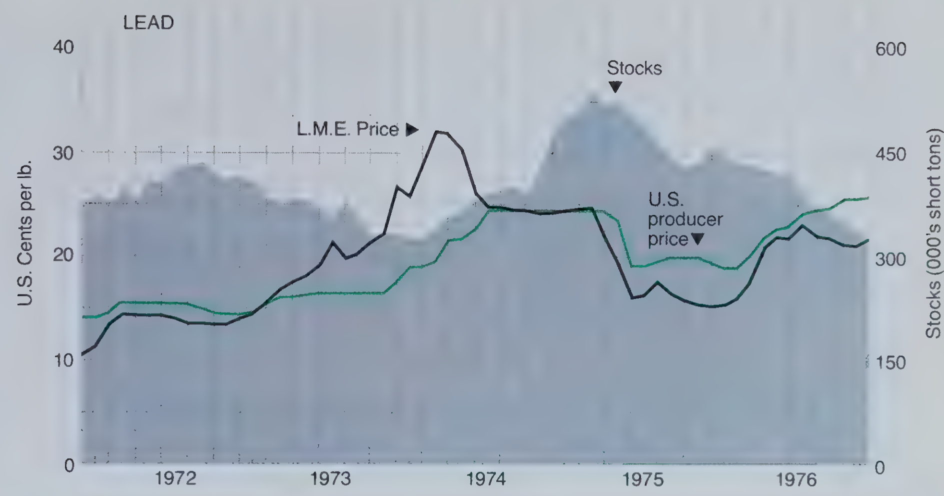


Zinc

WESTERN WORLD BALANCE	1974	1975	1976
	('000 Short Tons)		
Supply	5,250	4,500	4,300
Consumption	5,050	3,900	4,400
Year end stocks	500	1,100	1,000

In early 1976 zinc demand recovered from the depressed levels of 1975. Inventory replenishment was a major factor as well as strong automotive demand. By mid-year, stocks had declined and smelter production had increased. When demand faltered in the third quarter, surplus production was reflected in rising stocks, widespread price discounting in Europe and an abnormal volume of offshore imports into the U.S.A. Mine production remained in balance with metal production due to strikes in Canada. There could be a surplus in 1977 with the startup of large new mines in Ireland and Spain.

The U.S. producer price declined in January 2¢ to 37¢ per lb. and a 3¢ increase to 40¢ in August was retroactively rescinded in October. The Canadian price was at 37¢ until a currency related adjustment in October lowered it to 36¼¢. Overseas, the published price was unchanged at $795 per metric ton.



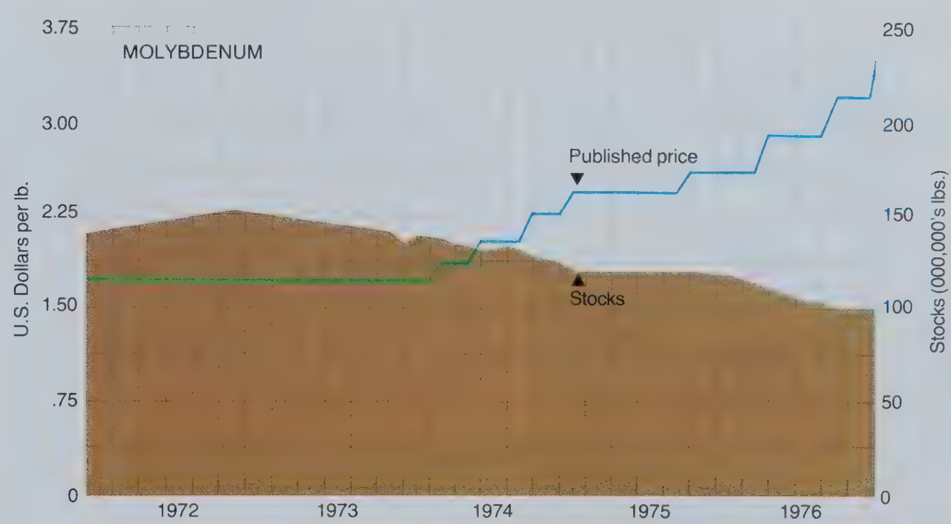
Lead

WESTERN WORLD BALANCE	1974	1975	1976
	('000 Short Tons)		
Supply	4,000	3,600	3,850
Consumption	3,860	3,610	3,980
Year end stocks	470	460	330

With consumption increasing 10% and production 7%, the market was firm throughout 1976. There was significant price improvement and stocks declined to working levels. Usage in batteries was strong due to automotive sales and increasing applications for off road vehicles and standby power. Higher gasoline demand resulted in increased consumption of lead in anti-knock compounds. In the U.S.A., the Environmental Protection Agency's schedule for the phase down of lead in gasoline will not be enforced, but the objectives must be met by October 1979.

In April, the dumping charge against Canadian and Australian lead imported into the United States was withdrawn by the International Trade Commission.

Producer prices in North America increased in several steps from 19¢ in January to 26¢ by year end with the LME rising from 15¢ to 22¢. Prices in Canada followed.



Molybdenum

WESTERN WORLD BALANCE	1974	1975	1976
	('000,000 lbs.)		
Supply	166	154	162
Consumption	180	160	180
Year end stocks	124	118	100

Although the basic steel industry was depressed in 1976, the high alloy and tool sectors were firm and molybdenum consumption rose 12% to the 1974 level of 180 million pounds. Production did not keep pace and stocks fell for the fourth consecutive year. Prices increased in three stages from $2.62 to $3.45 in December.

The outlook for molybdenum remains favourable and consumption is expected to grow by 7% per year. One of the major uses is for natural gas pipeline steel. The construction of a pipeline in Canada to transport frontier gas to markets in the South would substantially increase the requirement for molybdenum. Over the three year period during which the pipe would be manufactured, domestic consumption of molybdenum would more than double to approximately 8 million pounds per year.

Gold

WESTERN WORLD BALANCE	1974	1975	1976
	(000,000 Troy Ounces)		
Supply	40.3	36.2	40.4
Industrial consumption	23.7	30.5	37.0
Surplus (Deficit)	16.6	5.7	3.4

The price of gold declined from $140 per ounce in January to $103 in August and then recovered to average $134 in December.

In 1973-74 an increasing percentage of available gold was absorbed by the investment market. In 1975 consumption dropped, investors lost interest with falling prices and surplus metal acted as a further price depressant. At the lower prices last year, industrial consumption, began to recover and substantial buying developed in the Far East.

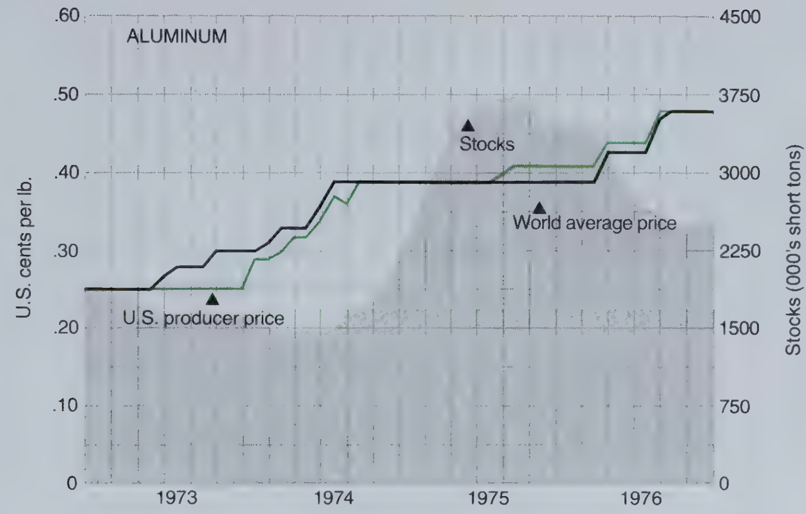
The most significant market factor in 1976 was the International Monetary Fund program to sell 25 million ounces over four years with gains to be used for the benefit of developing countries. Sales of 780,000 ounces were held at six week intervals starting June 2. Prices weakened initially but by year end the auctions did not appear to be having a negative effect on the market.

Silver

WESTERN WORLD BALANCE	1974	1975	1976
	(000,000 Troy Ounces)		
Supply—Primary	240	238	250
—Secondary	183	188	197
Consumption	458	402	437
Surplus (Deficit)	(35)	24	10

Prices followed the pattern of most commodities, rising throughout the first half, to a peak of $5.10 in July, before declining to $4.30 at year end. The market was in close balance and trading was influenced by the trends in gold and other commodity markets.

In October, the U.S. Federal Preparedness Agency proposed that the GSA strategic stockpile of 140 million ounces be sold at spaced intervals. While Congressional approval in 1977 is uncertain, potential supplies from this source continue to influence price expectations.



Aluminum

WESTERN WORLD PRIMARY BALANCE	1974	1975	1976
	(000's of short tons)		
Supply	12,926	10,734	11,037
Consumption	12,295	9,503	11,925
Year end stocks	2,218	3,449	2,561

U.S. aluminum shipments increased 27% to 6.7 million tons during 1976. Although smelter operating rates rose from 74% to 89%, inventories of primary metal declined by 457,000 tons reflecting rising consumption, particularly in the transportation, building and packaging sectors.

Overseas stocks declined by 431,000 tons as consumption outpaced production. By year end, operating rates had reached 85% of capacity, except for Japan.

U.S. prices increased from 41¢ to 48¢ per pound during the year with some discounting occurring in the autumn.

Phosphates

WORLD BALANCE *Year ending June 30*	1974	1975	1976
	(000's of Short Tons P_2O_5)		
Supply	29,070	28,540	31,460
Consumption	28,240	26,340	28,340
Surplus	830	2,200	3,120

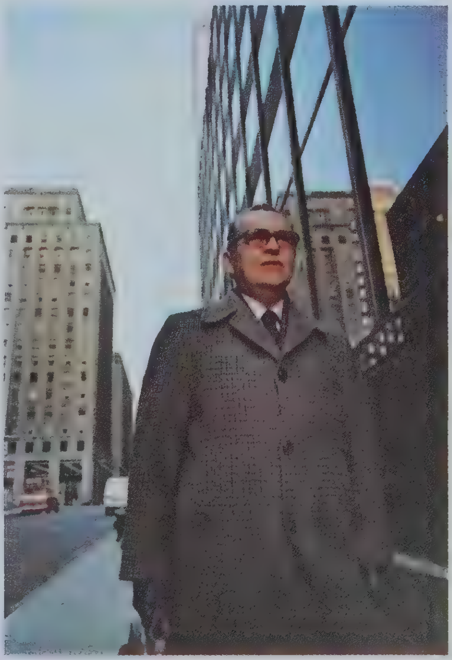
The combination of production curtailments and improved demand during the spring application period lifted prices above the previous depressed levels to $125 per ton. However, the basic surplus of capacity and production resulted in a reaction downward to $100 by year end. Although the lower prices will encourage a gradual recovery in overseas markets, phosphate capacity is forecast to be in surplus until 1980.

Potash

WORLD BALANCE *Year ending June 30*	1974	1975	1976
	(000's of Short Tons K_2O)		
Production	24,270	26,290	25,740
Consumption	22,968	22,352	23,518
Difference	1,302	3,938	2,222

Shipments of Saskatchewan potash to North American consumers were maintained at 4 million tons. However, export shipments declined by 50% causing a further rise in mine inventories despite a fall in production of 14% to 5.34 million tons.

The published price for standard grade decreased 15¢ per unit K_2O to 55¢ and then recovered to 65¢. The premium for granular grade increased from 5¢ to 10¢ per unit K_2O.



Manufacturing

A significant improvement from the depressed conditions affecting Canadian manufacturing in late 1975 failed to materialize during 1976. The continuation of a high value for the Canadian dollar for most of the year was an additional factor increasing the difficulties faced by most of Canada's manufacturing companies. Financial and labour costs that are high, relative to our major trading partners, have combined to jeopardize Canadian ability to compete in manufacturing.

Noranda's Canadian manufacturing companies exemplify this condition as even those with commanding market shares lost ground to imports. Capital expenditures were limited to the completion of three major projects as well as those necessary to maintain competitive production. The Companys' plants are in good repair with sufficient capacity to absorb any foreseeable volume growth arising from an improved economy.

Total sales for the manufacturing group were $575 million which represents 102% of 1974 and 106% of 1975 respectively. In volume terms, the plants were at 64% of capacity and hours worked were 590,000 less than 1975.

International operations outside the U.S. were subject to similar conditions and generally failed to meet profit objectives. In the U.S., however, completion of the aluminum expansion was well timed and coincided with a substantial turnaround of the associated building product manufacturing and distributing operation.

	METAL CONSUMED (Tons)
Canada Wire & Cable	70,000
Noranda Metal	43,000
	PRODUCT SHIPPED (Tons)
Noranda Aluminum and Norandex	145,000
Grandview and Canplas	25,000
Quebec Iron Foundries	28,000
Wire Rope Industries and Bridon-American	38,000

Forest Products

1976 was a year of pause in the growth of Noranda's various subsidiary and affiliated forest product operations. Dividends received from these amounted to $4.3 million in addition to $16 million repayments of advances.

The most significant single action was the commencement in June of the $91,000,000 rebuild of Fraser Companies' pulping and associated facilities in Edmundston, New Brunswick.

PRODUCTION	Lumber MM fbm	Market Pulp (000 tons)	Paper Products (000 tons)
Total	1,476.2	785.1	660.4
Noranda's Interest	675.6	293.1	296.4

Markets

Lumber sales strengthened during the year in line with U.S. housing starts which appear to be on a reasonable rising trend. Particle-board and plywood markets were extremely depressed due to oversupply and the price outlook remains cloudy.

Markets for pulp varied from quite strong for the long-fibred, northern sulphate grades, to very weak for some of the hardwood and sulphite grades. The large world inventories concentrated particularly in Scandinavia have the respect of the industry and encourage caution in the marketplace.

In general the Canadian industry had a troublesome year in 1976 and its outlook depends very much on the relative competitive position maintained against the United States. Noranda's balanced exposure in products as well as operating sites give it a unique and strong position in this industry.

Despite growing pulp inventories and somewhat uncertain markets entering 1977, it is expected that production restraint combined with improvement in the U.S. economy will result in a satisfactory year.

Environmental Control

Matters of industrial health and safety continue to be of primary concern to all operations' managers and their staff. Major installations of control equipment were completed at a number of locations during the year. These included baghouses, scrubbers and water treatment plants. Discharges of elements undesirable to the environment have been appreciably reduced by these measures.

The modernization program announced by Fraser Companies in late February for the Edmundston mill includes an expenditure of $55 million for environmental control. The major item in this program will be the chemical recovery and spent liquid incineration complex, consisting of a recovery boiler with electrostatic precipitation and sulphur dioxide recovery. The construction of two 110 foot clarifiers to treat the effluent from the Madawaska paper plant was completed in early October. This water treatment has significantly reduced the solids being discharged to the St. John River.

At Noranda Aluminum installations of fluidized bed baghouses to treat the emissions from the new pot lines are complete. This installation which cost $7 million will reduce the emission of fluorides to the atmosphere to levels below that required by regulation.

Process changes and major equipment modifications are in progress at the Noranda smelter with elimination of the roasting plant and revisions to the gas handling equipment. This program, when fully implemented, will substantially reduce the emissions of particulate matter. In April 1976, an intermittent control system to restrict ground level concentrations of sulphur dioxide was implemented in the Noranda area. This system is based on a computerized meteorological model, and allows for curtailment of smelting operations prior to adverse weather conditions.

Since 1971, capital expenditures for emission controls, including acid plants, exceed $71 million.

Research

Noranda Research Centre

A comprehensive joint research program involving Noranda and Electrolyser Corporation Limited, a Canadian company, was started in 1976. The object of this long term project is to develop large scale electrolytic hydrogen cells of advanced design and improved overall energy efficiency.

In the mining and metallurgical sector, progress was made in developing a hydrometallurgical process to convert molybdenum concentrate to molybdic oxide and a potentially important method of improving zinc recovery in the flotation of copper-zinc ores.

Expenditures were $3,900,000 in 1976 with about 25% in support of manufacturing and forest products operations and the balance for mining and metallurgical operations. Some 21% of the total budget was related to environmental matters.

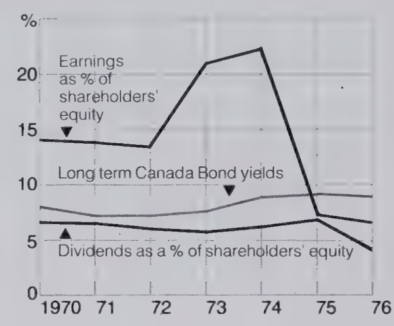
The Research staff at year-end numbered 144 of whom 60 were professionals.

In addition to its own efforts Noranda supports other industrial research. A recent development is "thin wall die casting technology", the use of which will enable zinc die casting producers to be cost and weight competitive with the plastics industry for the automotive market. The need for lighter weight and more fuel efficient vehicles has fostered this development.

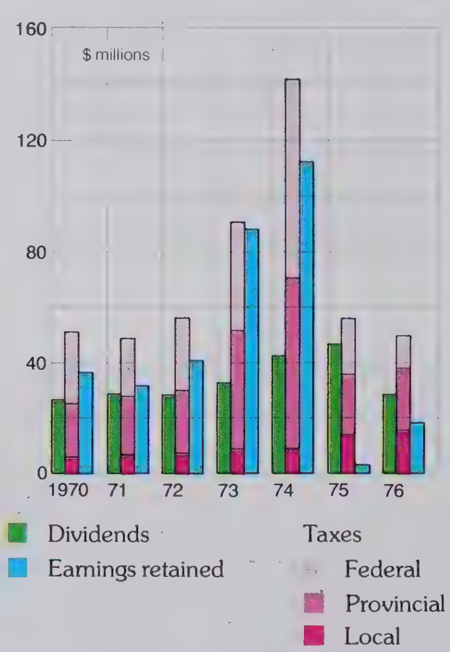
Financial Review

Data presented in these graphs have been prepared using historical costs as a base. The effects of inflation have not been taken into account.

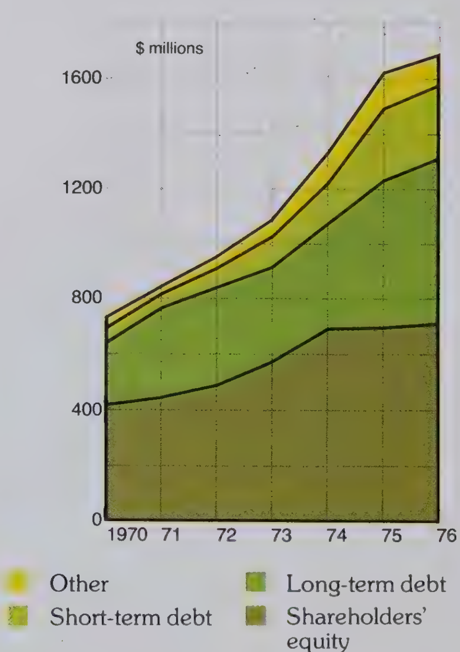
Earnings as % of shareholders' equity



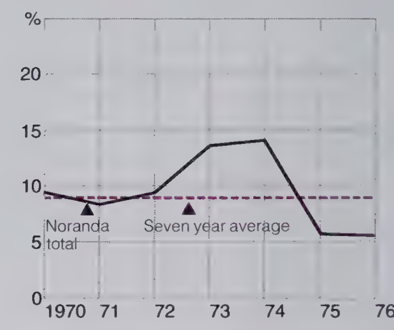
Dividends, taxes & earnings retained



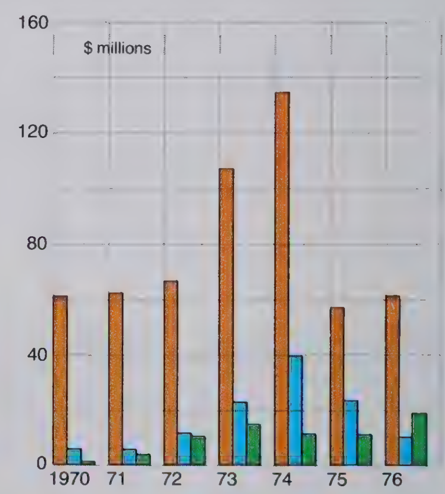
Sources of capital



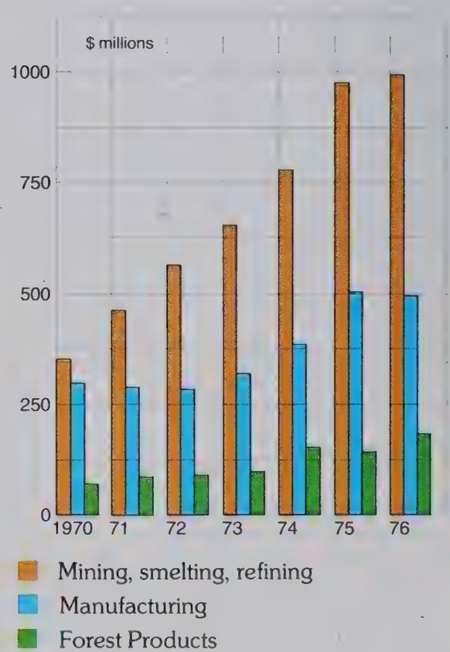
Earnings (before common costs) as a % of net capital employed*



Earnings by division (before common costs)



Net capital employed* by division



** Net capital employed defined as operating working capital, fixed assets at cost less accumulated depreciation, investments and other assets at book value.*

Accounting Policies

Basis of presentation of financial statements

The accompanying financial statements include, on a consolidated basis, the accounts of Noranda Mines Limited (the Company) and all of its subsidiaries. Noranda's interests in associated companies in which it has significant influence but not majority share ownership are accounted for on the basis of cost plus the Company's equity in undistributed earnings of such companies since the dates of investment.

Other long-term investments are carried at cost less any amounts written off.

Certain subsidiary and associated companies own shares in the Company. The Company's proportionate interest in the carrying value of such shares has been deducted from shareholders' equity. Similarly the Company's earnings per share have been calculated on the number of shares outstanding after reduction for such inter-company holdings.

Translation of foreign currencies

Foreign currency assets and liabilities of the Company and its subsidiaries and associated companies are translated into Canadian dollars as follows: working capital at exchange rates prevailing at the end of the period; fixed and other long-term assets, long-term debt and depreciation provisions on the basis of historic rates of exchange; revenues and expenses (other than depreciation) at average rates during the period. Exchange gains and losses from the translation procedures are included in consolidated earnings.

Inventories

Mine products are valued at estimated realizable value and other inventories at the lower of cost and market.

Futures contracts

From time to time the Company owns futures contracts for the purchase or sale of metals and currencies. These contracts are not reflected in the Company's accounts, beyond the amount of deposit required, until maturity date although provision is made for any estimated unrealized losses.

Depreciation and development charges

Depreciation of property, buildings and equipment and amortization of development expenditures are based on the estimated service lives of the assets calculated using the method appropriate in the circumstances, for the most part straight-line for fixed assets and unit of production for development.

Exploration

Mineral and petroleum exploration expenditures are charged against current earnings unless they relate to properties from which a productive result is reasonably certain or on which work is in process. Gains on sale or recoveries of costs previously written off are normally credited against exploration expense.

Income taxes

Under the income tax laws some costs and revenues are included in taxable income in years which are earlier or later than those in which they are included in income reported in the financial statements. As a result of these timing differences, income taxes currently payable normally differ from the provision for taxes charged to earnings. The differences are shown in the consolidated balance sheet as taxes provided not currently payable. Potential tax savings arising from losses incurred and investment tax credits are not reflected in earnings before realization unless they are virtually certain of recovery.

Interest

Generally interest expense is charged against income as incurred except interest that can be identified with a major capital expenditure program. Such interest is capitalized during the construction period.

Start-up costs

Start up costs on major projects are deferred until the facility achieves commercial production volumes. These deferred costs are written off over a reasonable period on either a straight-line or unit of production basis.

Research

Research expense is charged against income as incurred.

Aluminum plant

Certain of the assets and the related debt of the aluminum plant in New Madrid, Missouri, while technically the property and obligation of the City, are carried on Noranda's books by virtue of its long-term lease option and unconditional guarantees.

Noranda Mines Limited
(Incorporated under the laws of Ontario) and its consolidated subsidiaries

Consolidated balance sheet
December 31

Assets

Assets	1976	1975
	(in thousands)	
Current Assets		
Cash and short-term commercial notes	$ 74,129	$ 37,041
Marketable investments, at cost less amounts written off (quoted market value $22,703,000)	15,784	28,894
Accounts, advances and tolls receivable	281,575	246,865
Inventories	378,576	384,915
	750,064	697,715
Investments in and advances to associated and other companies (note 2)	**361,881**	372,226
Fixed Assets		
Property, buildings and equipment, at cost	1,465,297	1,364,900
Accumulated depreciation	(609,764)	(559,370)
	855,533	805,530
Other		
Development ($79,686,000), exploration ($19,695,000) and other expenditures deferred	116,955	99,029
Debenture and revenue bond discount and financing expenses, at cost less amortization	8,236	5,617
	125,191	104,646
	$2,092,669	$1,980,117

(See accompanying notes)

Auditors' Report

To the Shareholders of Noranda Mines Limited:

We have examined the consolidated balance sheet of Noranda Mines Limited as at December 31, 1976 and the consolidated statements of earnings, retained earnings and changes in financial position for the year then ended. Our examination of the financial statements of Noranda Mines Limited and those subsidiaries and associated companies of which we are the auditors was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances. We have relied on the reports of the auditors who examined the financial statements of the other subsidiaries and associated companies.

In our opinion, these consolidated financial statements present fairly the financial position of the company as at December 31, 1976 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Clarkson, Gordon & Co.,
Chartered Accountants
Toronto, Canada,
February 17, 1977

Liabilities

	1976	1975
Current liabilities	*(in thousands)*	
Bank advances	$ 164,222	$ 178,809
Accounts payable	255,657	221,627
Taxes payable	35,700	24,516
Debt due within one year (note 3)	103,685	84,761
	559,264	509,713
Deferred liabilities and holdbacks payable	**8,610**	9,014
Taxes provided not currently payable	**85,829**	117,413
Long-term debt (note 3)	**603,360**	533,057
Minority interest in subsidiaries	**120,351**	114,451
Shareholders' Equity		
Capital stock (note 4)		
Authorized: 40,000,000 shares of no par value		
Issued: 24,463,886 shares (note 4(a))	85,338	84,990
Contributed surplus	5,043	5,043
Retained earnings	636,852	618,414
	727,233	708,447
Less the Company's pro rata interest in its shares held by subsidiary and associated companies	**(11,978)**	(11,978)
	715,255	696,469
	$2,092,669	$1,980,117

On behalf of the Board:
William S. Row, Director
Alfred Powis, Director

Consolidated statements of earnings and retained earnings

For the years ended December 31

Earnings	**1976**	1975
	(in thousands)	
Revenue		
From metals, products and custom tolls (note 7)	$1,232,394	$1,156,423
From marketable investments (net)	2,360	2,851
	1,234,754	1,159,274
Expense		
Cost of metal production and products sold	943,850	870,572
Administration, selling and general expenses	87,097	83,909
Depreciation ($64,409,000) and development charges	70,230	66,340
Exploration and research written off (note 8)	16,970	25,665
Interest-net (including long-term debt interest of $39,604,000)	61,652	45,353
	1,179,799	1,091,839
	54,955	67,435
Income and production taxes (note 6)	25,068	41,458
Minority interest in profits of subsidiaries	10,050	10,089
	35,118	51,547
Earnings of Noranda and subsidiary companies	19,837	15,888
Share of after-tax profits in associated companies (note 2)	26,898	34,637
Earnings	**$ 46,735**	$ 50,525
Earnings per share	**$ 1.98**	$ 2.14

Retained Earnings		
Balance, beginning of year	**$ 618,414**	$ 615,042
Earnings	46,735	50,525
	665,149	665,567
Dividends paid (note 4(a))	28,297	47,153
Balance, end of year	**$ 636,852**	$ 618,414

(See accompanying notes)

Consolidated statement of changes in financial position

For the years ended December 31

	1976	1975
	(in thousands)	
Working Capital, beginning of year	**$188,002**	$182,890
Source of Funds		
Operations		
Earnings	46,735	50,525
Depreciation and development charges	70,230	66,340
Taxes provided not currently payable	(31,584)	15,077
Minority interest in profits of subsidiaries	10,050	10,089
Share of earnings less dividends of associated companies	(11,535)	(15,162)
	83,896	126,869
Issue of shares	348	251
Investments and advances	21,880	—
Long-term financing	108,100	163,800
Fixed asset disposals and adjustments	8,901	2,076
Increase (decrease) in deferred liabilities and holdbacks payable	(404)	2,210
	222,721	295,206
Application of Funds		
Fixed assets	115,628	158,147
Non-current assets (net) of acquired subsidiaries	—	(2,407)
Dividends paid to — Shareholders	28,297	47,153
— Minority interests in subsidiaries	4,150	4,410
Investments and advances	—	31,075
Current maturities of long-term debt	37,797	24,486
Deferred development, exploration and other expenditures	34,051	28,111
Other (net)	—	(881)
	219,923	290,094
Net increase in working capital	**2,798**	5,112
Working capital, end of year	**$190,800**	$188,002

(See accompanying notes)

Notes to consolidated financial statements

December 31, 1976

1. Accounting policies

The principal accounting policies followed by Noranda Mines Limited and its subsidiary companies are summarized under the caption "Accounting Policies".

2. Investments

(a) Investments in and advances to associated and other companies consist of:

Investments — carried on an equity basis	Direct Interest	Carrying Value ($000) **1976**	1975
British Columbia Forest Products Limited	29%	$ 44,686	$ 39,571
Craigmont Mines Limited	20%	3,963	4,058
Kerr Addison Mines Limited	41%	25,869	25,834
Mattagami Lake Mines Limited (N.P.L.)	34%	37,530	36,957
Northwood Pulp and Timber Limited	50%	31,583	22,965
Orchan Mines Limited	45%	10,985	10,277
Pamour Porcupine Mines Limited	49%	1,548	4,689
Placer Development Limited	31%	64,697	62,072
Tara Exploration and Development Company Limited	19%	30,647	30,647
Frialco/Friguia Guinean consortium	20%	22,303	23,452
Other Companies	—	45,039	46,942
		$318,850	$307,464
Other investments and advances			
Shares at cost less amounts written off	—	$ 10,839	$ 10,594
Advances and other indebtedness (note 2(c))		32,192	54,168
		$361,881	$372,226

(b) Included above are shares carried at a book value of $229,878,000 which had a quoted market value of $281,054,000 at December 31, 1976. The latter amount does not necessarily represent the value of these holdings, which may be more or less than that indicated by market quotations.

(c) $23,040,000 of advances and other indebtedness at December 31, 1976 is secured by shares of Tara Exploration and Development Company Limited. This amount may be repaid through the purchase of such shares by the Company at prices less than the carrying value of shares already owned.

3. Debt.

(a) Long-term debt	Dec. 31, 1976	Dec. 31, 1975
	(in thousands)	
Noranda Mines Limited		
— $10^1/_4$% notes due March 1, 1977	$ 25,000	$ 25,000
— $9^3/_4$% notes due July 15, 1982	25,000	—
— $9^3/_4$% notes due November 1, 1980 (of which $15,000,000 is payable in U.S. currency)	25,398	25,398
— $9^3/_4$% sinking fund debentures maturing May 1, 1994	50,000	50,000
— $7^1/_2$% sinking fund debentures maturing October 1, 1988	25,975	28,000
— $9^1/_4$% sinking fund debentures maturing October 15, 1990	37,942	38,755
Noranda Aluminum Inc.		
— $10^1/_2$% secured (sinking fund) notes due October 1, 1995 ($80,000,000 U.S.)	81,360	81,360
— 5.20% to 5.90% industrial revenue bonds, serial and sinking fund issues, maturing November 1, 1977, 1978 and 1993 (December 31, 1976 — $73,510,000 U.S. — December 31, 1975 — $76,035,000 U.S.)	78,670	81,400
— 8% Pollution Control Revenue Bonds due April 1, 2001 — ($10,500,000 U.S.)	10,315	—
Norandex Inc.		
— $5^1/_2$%-$9^1/_4$% mortgage notes payable in monthly instalments to 1990 (December 31, 1976 — $7,394,000 U.S. — December 31, 1975 — $10,288,000 U.S.)	7,863	10,994
Brunswick Mining and Smelting Corporation Ltd.		
— 5.85% first mortgage sinking fund bonds series "A" maturing April 1, 1986	10,595	12,170
— 7.25% general mortgage sinking fund bonds, series "A" maturing August 15, 1978	11,667	12,627
— 11% general mortgage sinking fund bonds, series "A" maturing December 1, 1996	35,000	—
Fraser Companies, Limited		
— $5^1/_8$% first mortgage and collateral trust bonds maturing April 1, 1987 ($9,000,000 U.S.)	—	9,671
— $6^1/_8$% sinking fund debentures Series "A" maturing April 1, 1987 ($8,250,000 U.S.)	8,857	—
— $10^3/_4$% sinking fund debentures maturing June 1, 1992 ($35,000,000 U.S.)	35,612	—
Northwood Panelboard Ltd.		
— 9% mortgage sinking fund bonds maturing May 15, 1991	4,680	5,000
Sundry Indebtedness	11,477	13,360
	485,411	393,735
Other debt: Notes payable	221,634	224,083
	707,045	617,818
Debt due within one year (including notes payable of $71,634,000 — December 31, 1976 — $74,083,000 — December 31, 1975)	103,685	84,761
Long-term Debt	**$603,360**	$533,057

Long-term Debt:
Maturities of long-term debt are as follows:
1978 — $ 13,152,000
1979 — $165,639,000
1980 — $ 46,204,000
1981 — $ 22,104,000
Subsequent — $356,261,000

(b) Notes payable, representing promissory notes with maturities from January to March 1977, have been classified as long-term debt to the extent of the Company's revolving contractual credits with its bankers of $150,000,000, extending to December 31, 1979.

4. Shareholders' Equity

(a) The issued capital stock at December 31, 1976 is summarized below:

	Shares
Class A	22,194,059
Class B	2,269,827
Total	**24,463,886**
Less the Company's proportionate interest in its shares held by subsidiary and associated companies	882,367
	23,581,519

During the year the following dividends were declared:

Class A — $1.20/share	$26,630,000
Class B — $1.07/share plus 15% tax on undistributed income	2,723,000
Total	**29,353,000**
Less the Company's proportionate share of dividends paid to subsidiary and associated companies	1,056,000
Net charge to the retained earnings	**$28,297,000**

Class A and Class B shares are voting, convertible into one another on a share for share basis and rank equally with respect to dividends and in all other respects. The only distinction between the two classes

is that the directors may specify that cash dividends on Class B shares be paid first out of tax-paid undistributed surplus on hand and then out of 1971 capital surplus on hand (as those expressions are defined in the Income Tax Act of Canada), with the result that Class B dividends so paid will be less than the Class A dividends by the amount of tax paid thereon.
(b) (i) During the year, 12,620 shares in the Company's capital stock were issued under the Company's stock option plan for $347,683 and 1,750 options were cancelled.
(ii) At December 31, 1976, options on 56,945 shares were outstanding, exercisable at prices varying from $26.17 to $30.23 for periods up to 1982.
(c) Under the Company's share purchase plan shares are sold to a trustee for resale to employees financed by an interest-free loan from the Company. At December 31, 1976, the amount of the loan included in accounts receivable was $4,296,000.

5. Commitments and contingent liabilities

(a) Approved capital projects and financing commitments outstanding total approximately $126,000,000 at December 31, 1976.
(b) The Company and its subsidiaries have guaranteed or are contingently liable for repayment of loans of associated and other companies to the extent of approximately $33,000,000.
(c) As at December 31, 1976 Niranda's total unfunded obligations under its pension plans with respect to past service is estimated at $21,600,000.

These obligations are funded as required by applicable governing legislation. In Canada the past service obligation is funded and absorbed against income over a period up to 14 years.

The increase in the past service obligation of $7,300,000, primarily attributable to recent changes in legislation affecting U.S. subsidiaries, will be amortized over periods of not more than forty years.
(d) The Company and certain of its subsidiaries from time to time enter into long-term lease arrangements for buildings and vessels, such arrangements currently giving rise to annual charges totalling approximately $2,805,000 and $1,200,000 respectively.
(e) The Company is one of twenty-nine defendants in several countries to a private antitrust action brought by Westinghouse Electric Corporation in a United States court, alleging conspiracy among so-called uranium producers. It is expected that the damages ultimately asserted by the Plaintiff will be substantial.

As well, the Company is one of fifteen defendants in an action for an injunction and $8,034,000, being contested in the Superior Court of the Province of Quebec, for alleged environmental contamination and interference with aboriginal rights of Cree Indians in Northern Quebec.

The Company believes it has strong defenses and is confident the actions will not succeed.

6. Income taxes

At December 31, 1976 certain subsidiaries of the Company had estimated loss carry-forwards of approximately $40,000,000, including $9,000,000 excess of undepreciated capital cost of fixed assets over their net book value. U.S. investment tax credits of $11,300,000 were also available. In 1976 U.S. income tax loss carry-forwards of $4,000,000 were realized, which gave rise to a reduction of $2,000,000 in the income tax provision.

7. Consolidated divisional revenues

Revenues from the main divisions of the business are set out on page 31 in the table of "Consolidated Divisional Results".

8. Exploration expense

In the current year a gain from the sale of Noranda's interest in certain oil and gas properties amounting to $9,000,000 has been offset against exploration expenditures written off.

9. Remuneration of directors and senior officers

The aggregate direct remuneration paid or payable by the Company and its consolidated subsidiaries to directors and senior officers amounted to $1,357,000.

10. Central Canada Potash

The Government of Saskatchewan has announced its intention to acquire the assets of some or all of the producing potash mines in the Province and has passed legislation enabling it to proceed by way of expropriation. An evaluation of Central Canada Potash was begun late in the year by consultants on behalf of the Crown-owned Potash Corporation of Saskatchewan and this evaluation may lead to an offer by it to purchase the mine. If a sale price is not agreed upon and the Province expropriates the assets, appeal will lie to arbitration and the courts.

Fixed assets of Central Canada Potash with an original cost of $109,000,000 and a net book value of $76,000,000 are included in the accompanying consolidated balance sheet. The depreciated replacement value far exceeds these amounts.

11. Anti-Inflation Program

The Company and its subsidiaries and associated companies in Canada are subject to, and believe they have complied with, controls on prices, profits, employee compensation and shareholder dividends under the Federal Government's Anti-Inflation Program.

Consolidated divisional results

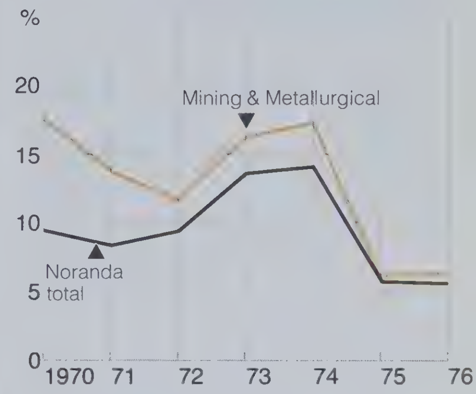
For the years ended December 31

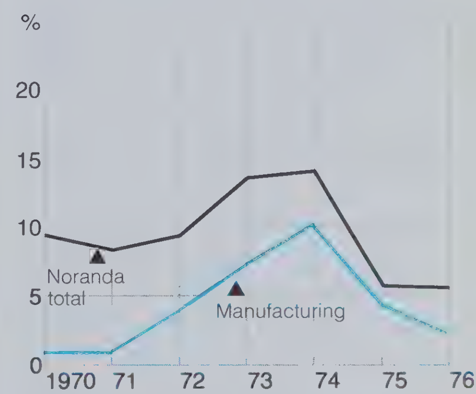
	1976	1975
	(in thousands)	
Revenue from metals, products and custom tolls		
Copper mining, smelting and refining operations*	$ 321,413	$ 294,460
Other mining and metallurgical operations**	340,197	371,582
Total mining and metallurgical operations	**661,610**	666,042
Manufacturing operations**	575,268	540,304
Forest products operations**	489,814	372,664
Gross revenue	**$1,726,692**	$1,579,010
Less: sales between divisions	99,000	85,001
sales by associated companies**	395,298	337,586
Revenue as reported	**$1,232,394**	$1,156,423
Earnings		
Copper mining, smelting and refining operations*	$ 45,824	$ 32,402
Other mining and metallurgical operations**	24,503	40,793
Earnings from mining investments	1,601	1,447
Gross mining and metallurgical earnings	**71,928**	74,642
Less exploration written off net of applicable tax reductions	10,307	17,889
Net mining and metallurgical earnings	**61,621**	56,753
Manufacturing operations and investments	10,611	23,286
Forest products operations**	19,224	11,232
Earnings before common costs	**91,456**	91,271
Less common costs	44,721	40,746
Earnings as reported	**$ 46,735**	$ 50,525
Breakdown of common costs		
Corporate office costs	$ 10,773	$ 10,315
Interest expense net of revenue	59,235	44,036
Unallocated research costs	1,471	1,423
Less applicable tax reductions	(26,758)	(15,028)
Total	**$ 44,721**	$ 40,746

*Consists of operations of the Horne, Geco and Bell Copper mines, Gaspe Copper Mines and Canadian Copper Refiners.

**Gross revenues and earnings include Noranda's share of the revenues and earnings of associated companies accounted for on an equity basis. These gross revenues include $123,875,000 from mining and metallurgical operations, $175,440,000 from forest operations, and $95,983,000 from manufacturing operations in 1976. ($121,782,000, $117,287,000 and $98,517,000 respectively in 1975).

Earnings as % of net capital employed†





† *Earnings before common costs expressed as a % of capital employed defined as operating working capital, fixed assets at cost less accumulated depreciation, investments and other assets at book value.*

Operations

Mining, Smelting & Refining

Wholly Owned — unless marked otherwise (-%)
Production — for the year 1976
Ore Reserves — as at Dec. 31/76
Ton — 2,000 lbs.

Legend

Cu	copper	**Mo**	molybdenum
Zn	zinc	**Hg**	mercury
Pb	lead	**K_2O**	potassium oxide
Ag	silver	**Cd**	cadmium
Au	gold	**U_3O_8**	uranium oxide
Ni	nickel		

Horne Division

MINING

	Tons (000)	Grade Cu %	Grade Au Oz/Ton
Horne Ore	158	1.38	0.124
Chadbourne Development Ore	26	0.10	0.061
New Insco	13	2.8	—
Fluxing Ore	268	—	—
Total Concentrate Produced	28	—	—

MINERAL INVENTORY

	Tons (000)	Grade Cu %	Grade Zn %	Grade Au Oz/Ton	Grade Ag Oz/Ton
Chadbourne	1,100	—	—	0.11	—
Magusi	1,551	1.2	3.5	0.03	0.9
New Insco	811	2.8	—	0.02	1.0
West Macdonald	2,200	0.1	5.6	0.03	0.9

Horne ore reserves were exhausted and mining operations ceased in July. The Chadbourne development was discontinued in March because of unfavourable gold prices.

Evaluation studies of the Magusi and West Macdonald properties were reviewed and the New Insco property was developed for production.

SMELTING

	Production: Material Smelted — Noranda (Tons 000)	Production: Material Smelted — Custom (Tons 000)	Production: Cu Content of Anodes Produced (Tons 000)
1976	479	799	229
1975	598	735	231
1974	730	839	269
1973	725	825	260
1972	705	780	236

As a result of concentrate shortages, reverberatory furnaces were occasionally placed on standby and the Noranda Continuous Smelting Reactor was shut down for 24 days.

As part of a major campaign to reduce dust emissions, the No. 2 reverberatory furnace was shut down for conversion to wet charge operation and four roasters were closed down. A program of intermittent emission control, started in April, was successful in reducing episodes of high ground level SO_2 concentrations. The program which entails frequent cutbacks, will be expanded.

The Noranda Continuous Smelting Reactor performed well with slag losses, smelting rates and fuel ratios all improved over 1975 and operated for 180 days without shutting down for refractory repairs, by far the best campaign since installation.

Gaspé Copper Mines

MINING

ORE TREATED	Tons (000)	Grade Cu %
Needle Mountain	1,574	1.20
Copper Mountain	10,705	0.43

MINERAL INVENTORY

	Tons (000)	Grade Cu %
Needle Mountain		
Proven	7,889	1.18
Probable	7,962	1.12
Pillars	12,161	1.54
Copper Mountain — Sulphide		
Proven	126,417	0.402
Probable	66,468	0.338
Oxide		
Proven	25,788	0.442
Probable	4,751	0.406

SMELTING

	Concentrates: Gaspé (Tons)	Concentrates: Custom (Tons)	Production: Cu (Tons)	Production: Acid (Tons)
1976	231,900	91,800	73,600	192,900
1975	205,300	110,500	73,200	174,900
1974	190,500	90,300	69,700	154,700
1973	107,400	99,800	49,300	12,300
1972	131,000	117,800	63,800	—

Operating losses were minimized by curtailing development in the underground mine and waste stripping in the Copper Mountain Pit. The work force was reduced by 10% and the increase in total operating costs held to 3% over the previous year. Nevertheless, improvements were effected in the operations and planned production was achieved in the mines and mills. Smelter throughput was less than planned but there was an increase of 2.5% in the tonnage of concentrates treated compared to 1975.

Geco Division

ORE TREATED

	Grade		
Tons (000)	Cu %	Zn %	Ag Oz/Ton
1,686	1.69	2.55	1.29

CONCENTRATES PRODUCED

Metal Content			
Cu Tons	Zn Tons	Pb Tons	Ag Oz
26,300	32,500	900	1,599,000

ORE RESERVES

	Grade		
Tons (000)	Cu %	Zn %	Ag Oz/Ton
27,500	1.87	3.59	1.49

Production was limited in accordance with lower metal market requirements. The stockpile of zinc concentrate remaining from production in previous years was shipped to the zinc plant at Valleyfield, Quebec. A continuing shortage of underground miners necessitated increased mechanization for bulk mining methods and decreased extraction of ore remnants and pillars by support methods.

The waste water treatment plant with a reactor-clarifier system for environmental protection was performing satisfactorily by year end. A major capital addition was the on-stream analysis system for improving metallurgical controls and recoveries in the mill.

Canadian Copper Refiners

REFINED METAL PRODUCTION

	Copper (Tons)	Silver (Oz)	Gold (Oz)
1976	387,000	22,501,000	336,000
1975	395,000	19,835,000	346,000
1974	427,000	19,413,000	352,000
1973	373,000	14,599,000	351,000
1972	376,000	14,165,000	377,000

Production of refined silver in 1976 is the highest on record.

A $4,000,000 expansion project to recover crude nickel sulphate from refinery electrolyte is under way and should be operating by mid-year.

An extensive revision of the dust and fume collection equipment in the selenium recovery plants is complete. This expenditure of $1,250,000 is part of an on-going program to reduce atmospheric emissions and improve working conditions.

Bell Copper Division

ORE MINED

	Grade	
Tons	Cu%	Au Oz/Ton
2,051,000	0.429	0.010

CONCENTRATE PRODUCED

	Metal Content	
Tons	Cu Tons	Au Oz.
28,310	7,300	9,500

ORE RESERVES

	Grade	
Tons	Cu %	Au Oz/Ton
29,600,000	0.486	0.012

Operations were shut down on February 7, 1976 by a legal strike which lasted 29 weeks. After settlement of the labour dispute, concentrator throughput reached record levels within a month and this rate continues. Few difficulties were encountered in reassembling a skilled work force.

The mineable ore reserves within the present open pit design were increased by 1.7 million tons.

Studies were carried out on the possible expansion of the present open pit mineable reserves. Diamond drilling confirmed additional mineralization in several locations both within and adjacent to the present pit limits. Evaluation of data is still in progress.

Boss Mountain Division

ORE MINED

Tons (000)	Grade Mo %
622	0.21

CONCENTRATE PRODUCED

Metal Content Mo Lbs
2,278,000

ORE RESERVES

Tons (000)	Grade Mo %
917	0.20

The results from underground mining were modestly improved and underground exploration was resumed. The program of diamond drilling, bulk sampling and process testing for the large, drill indicated, low grade mineralized zone was completed. However, the anticipated recovery of molybdenite, as suggested by early testing, was not confirmed and further evaluation will be necessary.

Brenda Mines (50.9%)

EARNINGS

	1976	1975
	$5,490,000	$2,606,000

ORE MINED

	Grade	
Tons	Cu %	Mo %
11,224,000	0.167	0.045

CONCENTRATES PRODUCED

	Metal Content	
Tons	Cu Tons	Mo Tons
64,000	16,100	4,000

ORE RESERVES

	Grade	
Tons	Cu %	Mo %
117,687,000	0.171	0.043

Concentrator grinding circuits operated under computer control which resulted in a record treatment rate of 30,261 tons per calendar day. Material formerly stockpiled as marginal ore was required to maintain this rate which resulted in a lower grade of mill feed.

Copper concentrate production was smelted at Noranda and refined at Canadian Copper Refiners Limited. New contracts have been made with smelters in Korea and Japan commencing with April production.

Molybdenum concentrates were leached to prime specifications, and sold on world markets. A licensee in South America is scheduled to commence operating a Brenda Leach system in mid-1977.

Although income and resource taxes claimed 56% of pre-tax earnings, an initial dividend of 13¢ per share was paid in December after nearly seven years of operation.

Brunswick Mining & Smelting (64.1%)

EARNINGS

	1976	1975
	$7,541,000	$12,600,000

MINING

ORE MINED	Tons (000)	Grade Pb/Zn %
	2,477	10.0

CONCENTRATES PRODUCED

Metal Content

Zn Tons	Cu Tons	Pb Tons	Ag Oz
133,000	3,800	40,700	3,012,000

ORE RESERVES

	Tons (000)	Grade Zn %	Pb %	Cu %	Ag Oz/Ton
Zn/Pb:					
No. 12 Mine:					
Proven	72,426	9.15	3.69	0.30	2.78
Probable	32,468	9.35	3.94	0.35	2.89
No. 6 Mine:					
Proven-Pit	244	4.93	1.82	0.51	1.87
-U/G	1,342	7.36	2.66	0.27	2.31
Copper:					
No. 12 Mine:					
Proven	9,474	1.13	0.40	1.11	0.85

A three-month strike at the Mining Division was settled on August 27. At year end operations had returned to normal. The project to expand No. 12 plant capacity to 11,000 tons per day by 1980 remains on schedule. Development of the No. 6 mine for underground production is virtually complete.

Capital expenditures, including the expansion, were $26.5 million.

SMELTING

Production	Pb Tons	Ag Oz	Sulphuric Acid Tons
1976	51,400	3,004,000	119,200
1975	50,900	2,195,000	139,700
1974	44,200	2,085,000	117,000
1973	34,450	1,255,000	100,200

Operations and production were satisfactory. The plant closed down six weeks for maintenance and reduction in lead metal inventory. The stockpile of lead concentrate was depleted in September and for the balance of the year production was limited by the available concentrate from the mine and some 5,700 tons purchased.

Central Canada Potash (51%)

ORE MINED	Tons (000)	Grade
	3,600	26.9% (K_2O)

MURIATE PRODUCED
1,396,000 Tons

ORE RESERVES	Tons (000)	Grade
	580,000	27.0% K_2O equivalent

Underground advance was 39 linear miles for a total of 196 miles since mining began in 1969. Production and shipments of muriate of potash were higher than in any previous year. As standard grade muriate became increasingly difficult to market, the compaction plant expansion was resumed in order to make all the product saleable. The additional new facility for the manufacture of premium grade, coarse and granular products should be operating in 1977.

The 1975 judgement in the Saskatchewan Court of Queen's Bench found the province's prorationing scheme and actions related to regulation of trade and commerce to be outside of the competence of the Legislature of Saskatchewan and awarded damages to the company in the amount of $1.5 million. However, this finding was successfully appealed by the province when in January 1977, the Saskatchewan Court of Appeal ruled that the province does have the power to control the production of potash within the province and to set the minimum price at the mine, and the damages were set aside. Application has been made for leave to appeal this ruling before the Supreme Court of Canada.

The overall rate of taxation which became excessive with Saskatchewan's additional Reserve Tax on potash companies in July 1974 has continued with no change indicated.

In pursuit of the announced intention of the Saskatchewan Government to acquire the assets of "some or all" of the producing potash mines in the Province, an evaluation of C.C.P. was begun late in the year by consultants on behalf of the government owned Potash Corporation of Saskatchewan. This may lead to acquisition of C.C.P.'s assets in Saskatchewan by the Corporation.

Alberta Sulphate

PRODUCTION
48,200 Tons sodium sulphate

RESERVES
2,500,000 Tons

RECOVERABLE PRODUCT
950,000 Tons

Product prices remained steady during the year and some 61% of production was sold as detergent grade at the premium price. However, plant output was substantially reduced by excessive precipitation early in the year which diluted the sulphate concentration in the lake feed to the extraction plant and resulted in lower profit margins.

Belledune Fertilizer

Production of diammonium phosphate was severely curtailed in 1976, to reduce inventory to a level consistent with sales. The plant operated for only four months and produced 52,000 tons of product.

Langmuir Property (55%)

ORE TREATED	Tons	Grade Ni %
	275,970	1.50

ORE RESERVES	Tons	Grade Ni %
	648,700	1.30

PRODUCTION OF METAL IN CONCENTRATE 3,500 Tons of Ni

As stope mining by the sub-level retreat method in No. 2 zone advanced to increasing depth, the walls at higher elevations began to cave. In August a surface subsidence became apparent over the upper mined out stopes, but it appears to be under control and has not affected operations. However, ground conditions may deteriorate as extraction moves deeper and ore reserves were re-estimated with allowance for increasing dilution.

Additional underground drilling from the 7th level, south of No. 2 zone confirmed some potential for additional ore and diamond drilling from surface indicated 200,000 tons of possible ore in No. 1 zone. A decline adit from surface was started to enable underground examination of it.

Pamour Porcupine Mines (48.8%)

LOSS	1976	1975
	$6,179,000	$2,096,000

ORE RESERVES

		Grade		
	Tons (000)	Au Oz/Ton	Ag Oz/Ton	Cu %
Pamour				
□ No. 1 Mine	1,296	0.10		
□ No. 3 Mine	52	0.24		
Schumacher				
□ Division	1,544	0.07	0.08	0.55
Ross Mine	377	0.15	0.15	0.12
Total Reserves	3,269			

ORE TREATED

		Grade		
	Tons (000)	Au oz/ton	Ag Oz/Ton	Cu%
Pamour				
No. 1 Mill	1,015	0.109	—	—
Schumacher	860	0.074	0.102	0.37
Total treated	1,875			

BULLION AND CONCENTRATES PRODUCED

Metal Content		
Au Oz	Ag Oz	Cu Tons
153,400	69,800	3,100

Despite the abandonment of more labour intensive mining operations and the implementation of cost reduction programs, the much lower prices for gold and weak markets for copper resulted in serious financial loss.

The Ross mine in Holtyre and the main Hollinger property, adjoining the Schumacher mine in Timmins, were purchased from Hollinger in June, at which time the Ross mill was shut down for salvage and thereafter the Ross ore was trucked to the Schumacher concentrator for treatment.

By year end the number of employees had been reduced by some 30% to 856, productivity had been substantially improved and in the last month there was a small operating profit. Unless there is a continuing improvement in profitability, the operations will be terminated.

Orchan Mines

(45.1% Direct; 5.7% Indirect)

EARNINGS	1976	1975
	$1,617,000	$2,189,000

ORE TREATED

	Grade	
Tons	Zn %	Cu %
468,000	6.74	0.78

ORE RESERVES

		Grade		
	Tons (000)	Zn %	Cu %	Ag Oz/Ton
Orchan—Proven	858	6.3	0.8	0.7
Norita—Proven	361	5.5	0.9	1.3
—Drill Indicated	1,404	6.4	0.5	0.6
Radiore #2—Drill Indicated	153	1.0	2.0	—
P.D. Division—Drill Indicated	1,500	4.5	0.9	—

CONCENTRATES PRODUCED

Metal Content		
Zn Tons	Cu Tons	Ag Oz
27,400	2,700	162,800

Production from the Orchan main mine was supplemented with ore from the Norita Division and treated in the Orchan concentrator. Production from the Radiore No. 2 mine awaits higher copper prices.

A low grade zinc/copper deposit was acquired by agreement with Phelps Dodge Corporation of Canada and preliminary site preparation started for development by underground mining. The Province of Quebec extended the road toward this property by some 6 miles leaving about 12 miles of winter road to be upgraded.

Exploration work was continued on large blocks of claims surrounding the P.D. deposit.

Kerr Addison Mines

(41.2 Direct; 2.3% Indirect)

EARNINGS	1976	1975
	$6,774,000	$9,000,000

Earnings for 1976 include $1.7 million in special gains compared to $1.5 million in 1975.

The minority interest in Agnew Lake Mines Limited, was acquired from Anglo American Corporation. Construction of surface facilities and mine development is on schedule and production should commence in the second quarter of 1977. Minimum rating of the plant at capacity is 1,000,000 lbs. U_3O_8 per annum.

A 75% interest was acquired in Mogul of Ireland in March 1976. This zinc-lead mine in County Tipperary, Republic of Ireland, operates at approximately 3,000 tons per day.

At the 60% owned Grum deposit in the Yukon Territory the on-site evaluation of zinc-lead mineralization was completed. Metallurgical testing and assessment of data preliminary to a feasibility study should be completed during 1977.

PRODUCTION

	Interest	Ore Mined Tons (000)	Metal Content In Concentrates
Kerr Addison	100%	264	110,740 Oz Au
Blue Hill	60%	176	8,350 Tons Zn 1,820 Tons Cu
Mogul of Ireland	75%	1,004	54,800 Tons Zn 14,900 Tons Pb

ORE RESERVES

	Tons (000)	Grade	
Kerr Addison	833	0.46 oz Au/Ton	
Blue Hill	219	3.20% Zn	1.46% Cu
Mogul of Ireland	5,000	6.05% Zn	2.57% Pb
Agnew Lake	11,200	1.09 Lbs U_3O_8/Ton	

Mattagami Lake Mines
(34.1% Direct; 8.5% Indirect)

CONSOLIDATED EARNINGS

	1976	1975
	$14,985,000	$24,400,000

ORE TREATED

	Grade			
Tons	Zn %	Cu %	Ag Oz/Ton	Au Oz/Ton
1,226,000	7.3	0.55	0.93	0.014

CONCENTRATES PRODUCED

Metal Content	
Zn Tons	Cu Tons
81,600	5,000

ORE RESERVES

	Grade			
Tons	Zn %	Cu %	Ag Oz/Ton	Au Oz/Ton
9,605,000	7.1	0.58	0.95	0.015

Operations ran smoothly with good metallurgical results and lower labour turnover. Preparations are complete for an exploration decline to the 2000-foot horizon and work is underway.

Lyon Lake Division

ORE RESERVES

	Grade				
Tons	Zn %	Cu %	Pb %	Ag Oz/Ton	Au Oz/Ton
4,030,000	6.66	1.15	0.63	3.39	0.010

Shaft sinking is complete and installation of services in progress. Development work is proceeding satisfactorily with some of it being performed by company employees.

Federated Genco
(40% owned by Mattagami Lake Mines)

Federated Genco, recovers non-ferrous metals from secondary materials. Despite a substantial increase in sales revenue and shipments of most products, net earnings were below those of 1975 due to competitive pressures in the export market which severely reduced margins.

Mattabi Mines Limited
(60% owned by Mattagami Lake Mines)

ORE TREATED

	Grade			
Tons	Zn %	Cu %	Pb %	Ag Oz/Ton
1,066,000	8.13	1.23	0.76	3.53

CONCENTRATE PRODUCED

Metal Content			
Zn Tons	Cu Tons	Pb Tons	Ag Oz
75,600	10,900	2,250	2,505,000

ORE RESERVES

	Grade			
Tons	Zn %	Cu %	Pb %	Ag Oz/Ton
6,500,000	6.89	0.79	0.68	2.67

Operations were at capacity with good grades. Ore reserves declined by the tonnage milled, and were adjusted downwards due to interpretation of new data obtained through diamond drilling from underground. Some 1.5 million tons were placed in a sub-ore category, all or part of which may be treated under more favourable economic conditions.

Canadian Electrolytic Zinc
(22.7% Direct; 34.5% Indirect)

METAL PRODUCTION

	Zinc Tons	Cadmium Pounds
1976	125,800	380,000
1975	117,700	401,000
1974	134,800	772,000
1973	148,800	598,000
1972	145,000	854,000

Installation of plant and equipment to improve metal recoveries and expand capacity to a rated 620 tons per day is complete. However, operating rates remained reduced and the plant was shutdown for three weeks during the summer.

Because of the high cost of raw materials and the depressed state of the fertilizer market, operations at St. Lawrence Fertilizers have been suspended since April. Production of finished product was 17,000 tons. Sulphuric acid produced at the zinc plant, normally consumed in making fertilizer, was sold to commercial markets.

Placer Development
(31.4% Direct; 1% Indirect)

EARNINGS

1976	1975
$17,960,000	$16,285,000

An improvement in earnings was due primarily to the abolition of British Columbia Mineral Royalties, strong molybdenum markets, lower exploration expenses and a credit resulting from a reduction in Philippine withholding tax on dividends received from Marcopper Mining Corporation.

At December 31, 1976 the company had outstanding an offer to purchase shares of Canadian Export Gas and Oil Ltd. (CEGO) at $6.45 per share.

OPERATIONS

		Production	
	Interest	Ore Milled Tons (000)	Metal Content in Concentrate
Endako Mines Division	100%	9,400	7,500 Tons Mo
Gibraltar Mines	71.9%	8,500	31,900 Tons Cu
Marcopper Mining	40%	9,700	52,400 Tons Cu
McDermitt Mine	51%	103	1,729,000 Lbs Hg

ORE RESERVES

	Tons (000)	Grade %
Endako Mines Division	240,000	0.085 Mo
Gibraltar Mines	300,000	0.36 Cu
Marcopper Mining	85,000	0.58 Cu
McDermitt Mine	2,874	0.50 Hg

Craigmont Mines
(19.7% Direct, 14% Indirect)
Year Ended October 31, 1976

EARNINGS

1976	1975
$3,919,000	$3,600,000

ORE MILLED

Tons	Grade Cu %
1,946,000	1.35

CONCENTRATES PRODUCED

Metal Content
25,282 Tons Cu.

ORE RESERVES

Tons	Grade Cu %
5,696,000	1.85

Mine operations were normal. The company has undertaken a three-year oil and gas exploration program in Western Canada with expenditures of $1.5 million annually.

Empresa Minera De El Setentrion (60.5%)

Control of extremely hot water from underground streams remains the major operating problem facing the mine in Nicaragua and, during the year, a major inflow from a previously unknown source (at 169°F) blocked access to higher grade reserves. A new shaft to reach this ore is in progress, however, mining has been and will be restricted to low grade reserves until this can be completed.

After treatment of 123,000 tons of ore averaging 0.44 oz. gold per ton, proven ore reserves decreased about 15% to 177,000 tons of similar grade. Due to the depressed gold price, and the lower grade, earnings decreased sharply to $1.6 million from $3.9 million in 1975.

Empresa Fluorspar

(74.6% direct: 14.6% indirect)

Shipments of fluorspar ore from 49%-owned Cia Minera Las Cuevas, in Mexico, declined almost 50% to 126,000 tons, reflecting decreased steel industry demand; in part the result of inventory reduction programs. Reduced demand also affected shipments of concentrate which totalled only 68,000 tons, compared to 80,000 tons in 1975.

Net earnings reported on the basis of dividends received from Las Cuevas, were $1.1 million compared to $0.9 million in the previous year.

Chile Canadian Mines (49%)

This mine in Northern Chile continued to operate at a small loss in 1976; producing about 1,800 tons of copper. Being a low grade mine it is not economic at prevailing copper prices and may have to be closed.

Manufacturing

Canada Wire

Although the Company matched its Canadian competitors, the lack of buoyant capital spending activity in Canada, particularly by utilities, made for a frustrating year.

The international affiliates generally performed well under difficult conditions, but the devaluation of the Mexican peso in August cost the Company heavily, through its Mexican interests.

Plans to improve the Company's equity position in Brazil were not fulfilled. The new equipment wire plant in Orangeville is nearing completion and an expansion at the Quebec City plant of the Industrial Wire and Cable Division is in progress. Elsewhere capital expenditures were held to those essential to maintenance of competitive ability.

Canada Wire is carefully monitoring the development of technology related to its basic business. This has led to a participation in development and manufacture of low-loss optical glass fibres, as well as to proprietary positions in other specialty processes.

Noranda Aluminum

The expected recovery of primary aluminum markets occurred swiftly at the beginning of 1976 and was maintained for most of the year. The Company completed construction of its second 70,000 ton potline in June on schedule and within budget. The new facility was well timed and resulted in record production of 99,700 tons for the year. Sales were nearly double those of 1975.

The Company's interest in the Guinean bauxite-alumina venture was unprofitable again due to a world imbalance between alumina and aluminum production. Continuing improvement in primary aluminum production could correct this situation within two years. Nevertheless the assurance of raw material supply for the aluminum reduction and fabricating facilities is considered of prime importance.

Noranda Metal Industries

The depressed conditions of 1975 continued throughout the year with operations reduced to a minimum basis everywhere. The Bellingham, Washington plant has been permanently closed and the property offered for sale.

The Special Metals plant at Arnprior was successful within the limits of the market available to it. Anticipated sales were affected by utility spending cutbacks. The final equipment will be fully operational by June 1977 and current backlogs indicate reasonable operating rates in the foreseeable future.

Prospects will improve as capital spending in North America accelerates and unused plant capacity can be utilized.

Quebec Iron Foundries

The Bathurst, N. B. plant has been terminated and the foundry in Surrey, B.C. is to be placed in reserve pending improved market conditions. Q.I.F. has developed a new alloy for grinding media which should permit recapture of business lost to forged steel. The prospects for both the Noranda and Mont Joli foundries are therefore promising. These plants will also benefit from completion of the scrap shredding facilities at Moncton which will be operating in the first quarter of 1977.

Norandex

As reported last year, Norandex undertook a major reorganization during 1976 which is now complete. This program has reduced the number of products sold by 75%, improved the design of the remaining products, closed several unprofitable branch warehouses and substantially trimmed overheads. The result is an operation which was soundly based at year end and is well poised to take advantage of the expected strength in the 1977 U.S. housing market.

Grandview Industries

Most divisions of this plastics company performed as expected with the exception of the Edmonton pipe plant. As a result, this plant was terminated at December 31 and the equipment will be moved to Langley, B.C. Plans are underway to reorganize the operations into a more economical force without major capital cost.

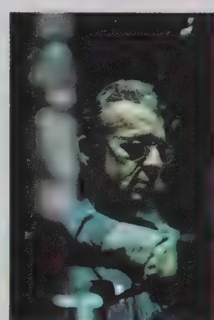
The associated Canplas Industries continued to do well, producing plastic fittings at its plants in Barrie and New Westminster.

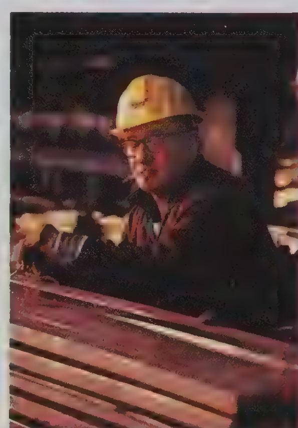
Wire Rope Industries (51.8%)

The slow business recovery plus continuing cost inflation affected the wire rope business during the year and profit performance was below that of 1975. Nevertheless, the Company held its own, acquired the largest chain link fencing operation in Western Canada, added a new service warehouse in Edmonton and took over 100% of Gourock Industries, its polypropylene rope subsidiary.

Bridon American (49%)

Competition in U.S. markets remained severe and the company did not make the progress expected. Work is proceeding on the new wire mill at Exeter, and on rationalizing the plants at Exeter and Muncy, Pa. Financing for these projects was arranged by equity subscriptions of $9 million including $4.8 million from Noranda and term borrowings of $10.5 million.





Forest Products

Northwood Mills

The Sawmills and Building Materials Division vastly improved operations in 1976 and the Sales Division operated successfully. However, a surplus chip position in the B.C. interior developed during the fourth quarter. This resulted in significantly reduced revenues. The Manufacturing Division was sold in March. The Panelboard plant in New Brunswick was closed at year-end to permit inventory liquidation and further analysis of the plant's prospects. Initial reports remain encouraging.

Fraser Companies (55%)

Operations were maintained at approximately 92% of capacity with the only real softness occurring in markets for sulphite pulp and bond papers. Earnings of $11.1 million were second best in the Company's history. Main factors in this performance were a productive labour force and uninterrupted operations. Several major labour contracts were settled during the year without a strike.

Two important effluent control facilities began operations during the year and construction capabilities were enlarged to handle the major Edmundston conversion (to magnesium bisulphite), expansion (by 100 tons per day), and modernization (bleaching and chemical recovery). Continued effort is being applied to determine a viable development program for the old Atholville sulphite pulp mill.

Improvements in facilities at the two sawmills produced excellent results which should be further improved by changes and additions planned in 1977.

The Company's forests were sprayed to eliminate spruce budworm infestations with apparent success and no side effects, notwithstanding the debate surrounding this program. Ground was broken for the Company's tree nursery, which is expected to be producing 7,000,000 seedlings per annum in 1979.

Northwood Pulp & Timber (50%)

The major revisions to the Houston sawmill were successfully completed in time to benefit from improved lumber markets. The Company's bleached northern kraft pulp is fortunately the most desired of pulp products and was thus in the strongest segment of the market. These two factors, plus stable operations in the other sawmills and much improved performance in the pulp mill, resulted in the Company's best financial year.

At year end Northwood had no major capital commitments, had repaid its original financing and was able to arrange modest new borrowings sufficient to repay $32 million of advances from its parents, outstanding since 1971.

B.C. Chemicals also had a record year with chlorate production and sales exceeding plan. The crude tall oil plant is still facing operating difficulties as well as soft markets.

British Columbia Forest Products (28.5%)

Earnings improved again in 1976 to a record $26.2 million. This performance was achieved despite the handicap of a Canadian dollar premium, poor plywood market and softening pulp markets which required production cutbacks.

Capital resources were devoted to maintaining and upgrading existing facilities as well as participation in the management and construction of the Donohue-St. Felicien integrated pulp and lumber complex. Altogether the capital program, including road development, amounted to $21.4 million.

Northwood Mills

	Production	Sales		
	Nwd. Mills	Nwd. Mills	Nwd. Building	
	Lumber Mfbm	Lumber Mfbm	Lumber Mfbm	Panelboard MSM 1/16"
1976	178,500	711,000	284,000	1,039,000
1975	110,000	367,000	410,000	1,197,000
1974	110,000	660,000	396,000	1,044,000
1973	194,500	701,000	368,000	888,000
1972	187,500	663,000	496,000	672,000

Fraser Companies

	Production			
	Lumber Mfbm	Pulp Tons	Paper Tons	Paperboard Tons
1976	64,700	74,100	375,800	32,600
1975	42,900	53,700	301,000	30,300
1974	51,600	97,800	372,400	32,600

Northwood Pulp & Timber

	Production		
	Lumber Mfbm	Pulp Tons	Chips B.D.U.
1976	512,000	231,000	334,000
1975	235,000	169,000	156,000
1974	447,000	208,000	282,000
1973	504,500	234,000	283,000
1972	481,000	230,000	257,000

British Columbia Forest Products

	Production			
	Lumber Mfbm	Pulp Tons	Newsprint Tons	Plywood MSM 1/16"
1976	721,000	480,000	252,000	1,141,000
1975	434,000	356,000	193,000	802,000
1974	474,000	466,000	246,000	986,000
1973	536,000	452,000	256,000	1,162,000
1972	537,000	273,000	233,000	748,000

Noranda Mines Limited
(and consolidated subsidiaries)

Five Year Financial Summary *($in millions)*

	1976	1975	1974	1973	1972
Earnings —					
Revenue from metals, products and custom tolls	**1,232.4**	1,156.4	1,147.0	848.5	581.1
Dividends, interest and other income	**2.4**	2.9	4.9	2.1	3.1
Cost of metal production and products sold including depreciation, exploration and administration	**1,118.1**	1,046.5	889.9	721.7	489.7
Interest expense	**61.7**	45.3	33.8	19.8	19.2
Income taxes	**25.1**	41.5	106.6	54.2	35.8
Minority interest in profits of subsidiaries	**10.1**	10.1	17.1	1.3	(2.0)
Earnings of Noranda and subsidiaries	**19.8**	15.9	104.5	53.6	41.5
Share of after-tax profits in associated companies	**26.9**	34.6	50.4	67.9	27.8
Earnings	**46.7**	50.5	154.9	121.5	69.3
Financial Position —					
Capital employed —					
Working capital	**190.8**	188.0	182.9	146.6	129.3
Investments in and advances to associated and other companies	**361.9**	372.2	326.0	220.6	205.5
Fixed assets — net	**855.5**	805.5	685.0	582.7	526.4
Other assets	**125.2**	104.6	90.8	69.6	52.2
Total	**1,533.4**	1,470.3	1,284.7	1,019.5	913.4
Capital sources —					
Shareholders' equity	**715.3**	696.4	692.8	577.7	487.9
Long term debt	**603.4**	533.1	383.7	335.6	349.9
Minority interest in subsidiaries	**120.3**	114.4	99.9	44.2	31.2
Other	**94.4**	126.4	108.3	62.0	44.4
Total	**1,533.4**	1,470.3	1,284.7	1,019.5	913.4
Changes in Financial Position —					
Sources —					
From operations	**83.9**	126.9	244.3	135.6	98.9
Long-term financing (net)	**70.3**	139.3	38.4	(14.3)	28.9
Other (net)	**3.5**	1.0	8.9	11.3	16.9
	157.7	267.2	291.6	132.6	144.7
Application —					
Dividends	**28.3**	47.2	42.3	32.9	28.0
Capital expenditure —					
Fixed assets	**115.6**	158.2	101.7	82.9	109.6
Investments and advances (net)	**(21.9)**	31.0	73.4	(36.0)	8.9
Other, including acquisitions	**32.9**	25.7	37.9	35.5	8.9
Increase in working capital	**2.8**	5.1	36.3	17.3	(10.7)
	157.7	267.2	291.6	132.6	144.7

		1976	1975	1974	1973	1972
Share data —						
Per share —						
Earnings		**$1.98**	2.14	6.59	5.17	2.95
Dividends (class "A")		**$1.20**	2.00	1.80	1.40	1.20
Market price range	High	**$39.75**	39.75	54.00	59.38	42.00
	Low	**$26.37**	27.25	26.63	41.50	32.62
Shares outstanding		**24,463,886**	24,451,266	24,442,441	24,343,771	24,297,805

Operating Interests

Domestic

Mining

Horne Division, Noranda, Que.	copper-gold
Geco Division, Manitouwadge, Ont.	copper-zinc-silver
Bell Copper Division, Granisle, B.C.	copper-gold
Boss Mountain Division, Hendrix Lake, B.C.	molybdenum
Alberta Sulphate, Horseshoe Lake, Alta.	sodium sulphate
Brenda Mines, Peachland, B.C.	copper-molybdenum
Brunswick Mining & Smelting, Bathurst, N.B.	zinc-lead copper-silver
Central Canada Potash, Colonsay, Sask.	potash
Gaspé Copper Mines, Murdochville, Que.	copper
Kerr Addision Mines, Virginiatown, Ont.	gold
Langmuir Property, Pamour, Ont.	nickel
Mattagami Lake Mines, Matagami, Que.	zinc-copper-silver
Mattabi Mines, Ignace, Ont.	zinc-copper-silver
Orchan Mines, Matagami, Que.	copper-zinc
Pamour Porcupine Mines, Pamour, Ont.	gold
Schumacher Division, Schumacher, Ont.	copper-gold
Placer Development	
Craigmont Mines, Merritt, B.C.	copper
Endako Mine, Fraser Lake, B.C.	molybdenum
Gibraltar Mines, McLeese Lake, B.C.	copper

Smelting & Refining

Horne Division, Noranda, Que.	copper smelter
Gaspé Copper, Murdochville, Que.	copper smelter
Canadian Copper Refiners, Montreal East, Que.	copper refiner
Brunswick Mining & Smelting, Belledune, N.B.	lead smelter
Canadian Electrolytic Zinc, Valleyfield, Que.	zinc reduction
Federated Genco, Scarborough, Ont. Plants: Burlington and Scarborough, Ont., Lachine, Que.	metal-alloys

Fertilizer Plants

Belledune Fertilizer, Belledune, N.B.	diammonium phosphate
St. Lawrence Fertilizers, Valleyfield, Que.	diammonium phosphate and triple superphosphate

Forest Products

Northwood Mills, Penticton, B.C. Sawmills — Penticton, Princeton (2), Okanagan Falls	lumber
Northwood Panelboard, Chatham, N.B.	particle board
Fraser Companies, Edmundston, N.B. Sawmills — Plaster Rock and Kedgwick, N.B. Pulp Mills — Edmundston, and Atholville, N.B.	lumber, pulp, paper, paperboard
Northwood Pulp and Timber, Prince George, B.C. Sawmills — Prince George, Houston, Upper Fraser and Shelley Pulp Mill — Prince George	lumber and pulp
B.C. Chemicals, Prince George, B.C.	chlorate and tall oil
British Columbia Forest Products, Vancouver, B.C. Sawmills — Mackenzie (3), Hammond, Victoria, Cowichan, Tilbury and Boston Bar Plywood and Veneer — Victoria, Cowichan and Delta Pulp Mills — Mackenzie and Crofton Newsprint Mill — Crofton	lumber, pulp, plywood and newsprint

Manufacturing

Canada Wire and Cable, Toronto, Ont. Plants: Toronto, Fergus, Orangeville, and Simcoe, Ont., St. John, N.B., Montreal East, Que., Winnipeg, Man., Weyburn, Sask., New Westminster, B.C.	copper rod, wire & cable
Industrial Wire & Cable Division, Toronto, Ont. Plants: Quebec, Que., Toronto, Ont.	
Canplas Industries, New Westminster, B.C. Plants: Barrie, Ont., and New Westminster	plastic moulding
Grandview Industries, (Rexdale) Toronto, Ont. Plants: Rexdale, Brampton and Mississauga, Ont., Montreal, Que., Weyburn, Sask., Langley, B.C.	plastic moulding and extrusion
Noranda Metal Industries, Montreal East, Que. Plants: Montreal East, Que., Fergus and Arnprior, Ont., New Westminster, B.C.	copper sheet, strip, tube and alloys
Quebec Iron Foundries, Mississauga, Ont. Plants: Mont Joli (2) and Noranda, Que., Moncton, N.B., Surrey, B.C.	grinding media and secondary metal
Wire Rope Industries, Pointe Claire, Que. Plants: Pointe Claire, Que., Vancouver, B.C.	steel wire rope
Gourock Industries, Boucherville, Que.	synthetic rope

International

Bridon-American, Exeter, Pa., U.S.A. Plants: Exeter and Muncy, Pa.	steel wire rope
Canada Wire and Cable (International)	wire and cable
Alambres Dominicanos, Dominican Republic	
Cabcan, Iran	
Industrias Conductores Monterrey, Mexico	
Fadaltec, Colombia	
Fercable, Spain	
Iconel, Venezuela	
Nigerchin Electrical Development Co., Nigeria	
Termocanada Condutores Electricos, Brazil	
Tolley Holdings, New Zealand	
Transwire Cable, South Africa	
Tyree Canada Wire, Australia	
Chile Canadian Mines, Chile	copper
Empresa Fluorspar, Mexico	fluorspar
Empresa Minera de el Setentrion, Nicaragua	gold
Fraser Paper, Madawaska, Maine, U.S.A.	paper
Kerr Addison Mines	
Kerramerican, Blue Hill, Maine, U.S.A.	zinc-copper
Mogul of Ireland, Republic of Ireland	zinc-lead
Manufacturera Colombiana de Cobre Y Laton, S.A. Colombia	copper tube
Noranda Aluminum, New Madrid, Mo., U.S.A.	aluminum reduction and wire and cable
Friguia, Republic of Guinea	alumina
Noranda Metal Industries	
French Tube Division, Newtown, Conn., U.S.A.	specialty tube
Norandex, Cleveland, Ohio, U.S.A.	aluminum building products
Placer Development	
Marcopper Mining, Philippines	copper
McDermitt Mine, Nevada, U.S.A.	mercury
Fox Manufacturing, Australia	industrial equipment and forest products
Northern Cattle, Australia	cattle

noranda